

# The Machine Tools Industry in Brazil

CECIMO General Assembly in Porto, Portugal

Global Competitiveness of the Machine Tools Industry

June 6, 2011



# Country

### Manufacturing Sector

### Machine Tools Sector

### Final Considerations



## Country

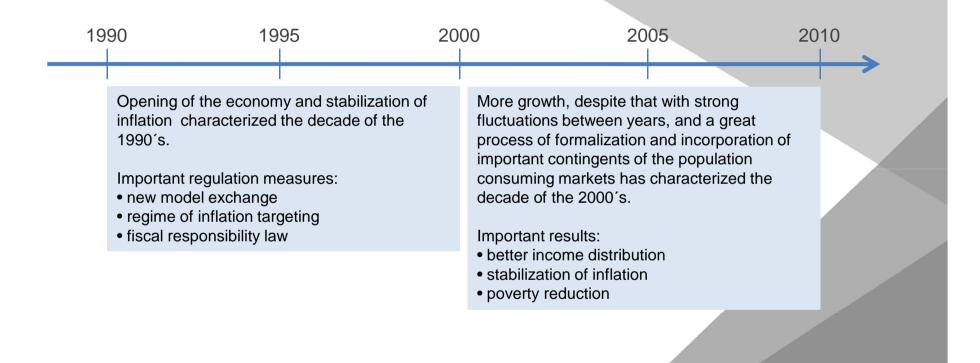
### Manufacturing Sector

Machine Tools Sector

### Final Considerations



## About Brazil Recent Facts



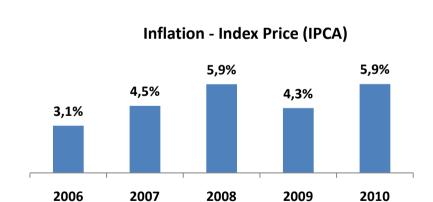


**USD** million

## About Brazil Economic Indicators

2.089.829 1.650.713 1.598.397 1.366.543 1.088.767

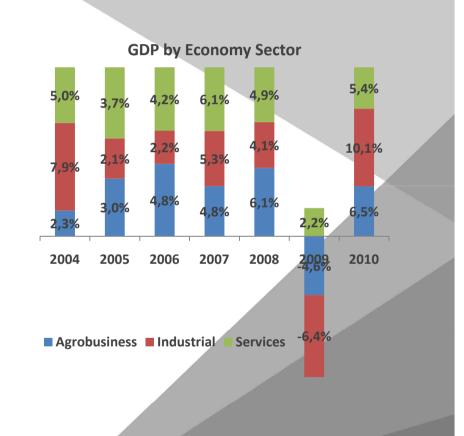
**GNP - Gross National Product** 



2008

2009

2010



Source: IBGE and Brazil Central Bank

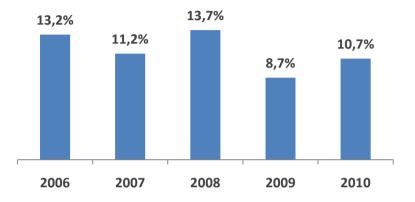
2006

2007

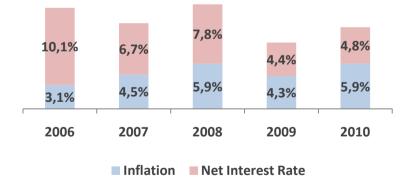


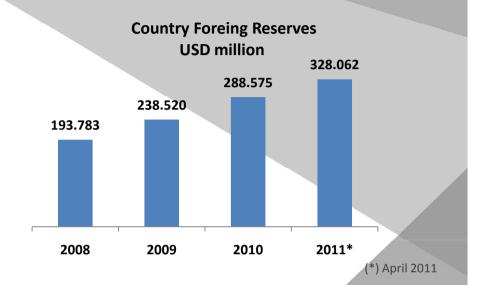
## About Brazil Economic Indicators

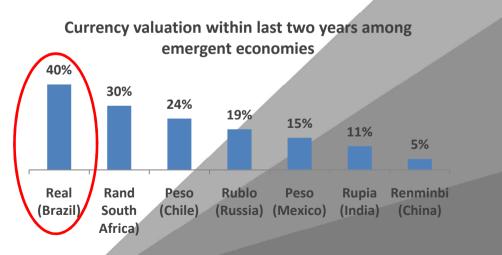




**Prime Net Interest Rate and Inflation** 



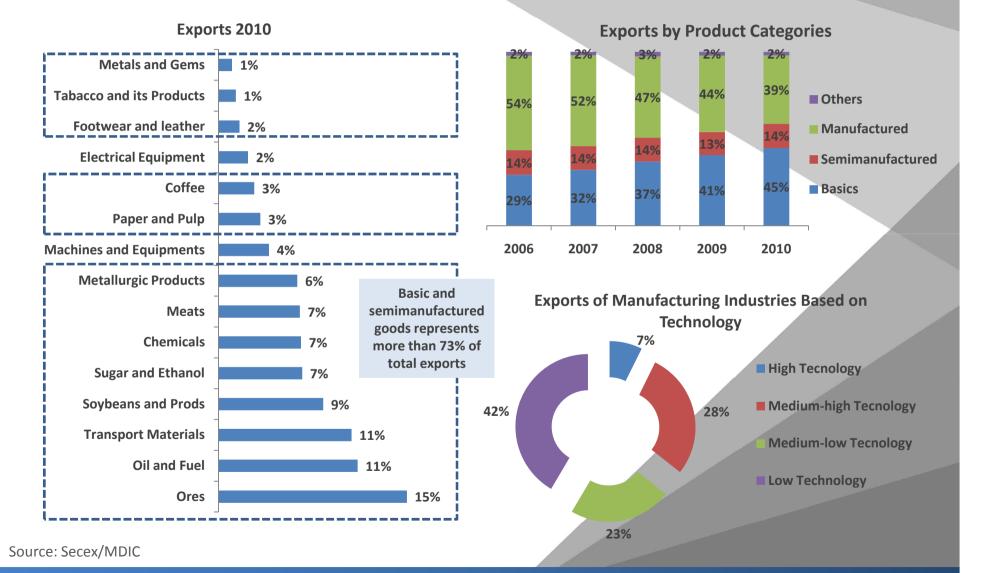




Source: IBGE , Brazil Central Bank, Secex/MDIC



## About Brazil Economic Indicators



**About Brazil** Brazil **Machinery Solutions Economic Indicators** The inventive global partner The first 10 destinations represents more than 55,3% USD 2010 million **Exports 2010 - by destination** China 30.786 80.000 40,0% United States 19.462 18.523 Argentina 70.000 35,0% Netherlands 10.228 USD 201,9 billions 8.138 Germany 60.000 30,0% Japan 7.141 **USD** million 25,0% 50.000 United Kingdon 4.635 Chile 4.258 40.000 20.0% Italy 4.235 30.000 15,0% Russia 4.152 3.894 Espanha 20.000 10,0% Venezuela 3.854 5,0% 10.000 South Korea 3.760 Mexico 3.715 0 0.0%

SouthKorea

Mexico

Venezuela

others

France

2010/

2009

23,7%

44,9%

25,5%

31,8%

67,2%

24,4%

60,3%

40,4%

44,7%

46,2%

6,8%

41,5%

38,9%

23,1%

3.576

71.558

201.915

France

Others

Total

Share

9,6%

9,2%

5,1%

4,0%

3,5%

2,3%

2,1%

2,1%

2,1%

1,9%

1,9%

1,9%

1,8%

1,8%

35,4%

100,0%

46,6% 15,3%

Source: Secex/MDIC

United States

Argentina Netherlands

United Hingdon

RUSSIA Espanha

It all

chile

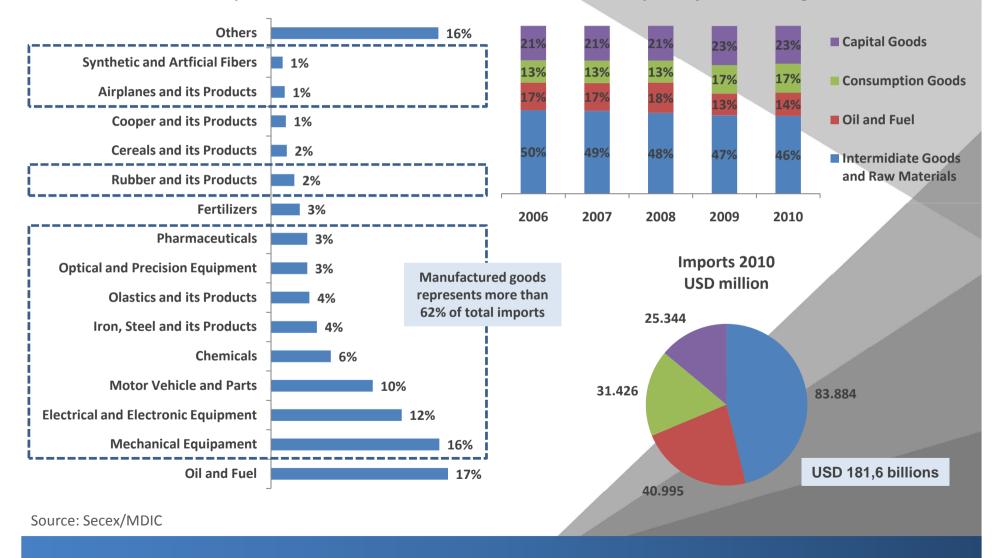
Germany



## About Brazil Economic Indicators

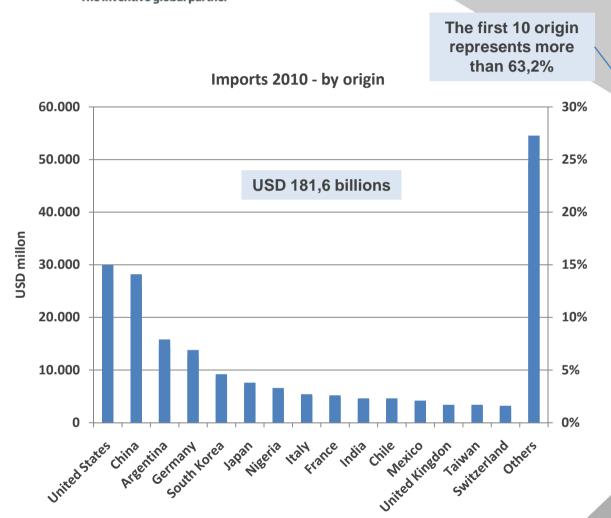
**Imports by Product Categories** 

Imports 2010

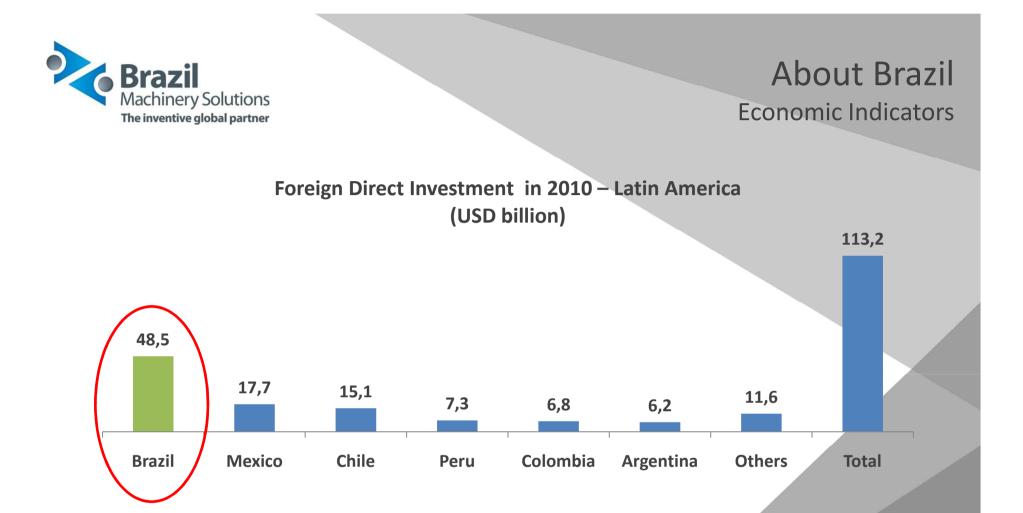


Brazil Machinery Solutions The inventive global partner

## About Brazil Economic Indicators



2010	USD million	2010/ 2009	Share
United States	27.249	35	15%
China	25.593	60,9	14%
Argentina	14.426	27,9	8%
Germany	12.552	27,2	7%
South Korea	8.422	74,8	5%
Japan	6.982	30,1	4%
Nigeria	5.920	24,4	3%
Italy	4.838	32	3%
France	4.800	32,7	3%
India	4.242	93,6	2%
Chile	4.091	53	2%
Mexico	3.858	38,6	2%
United Kingdon	3.155	31	2%
Taiwan	3.104	28,7	2%
Switzerland	2.876	39,4	2%
Others	49.541		27%
Total	181.649		100%



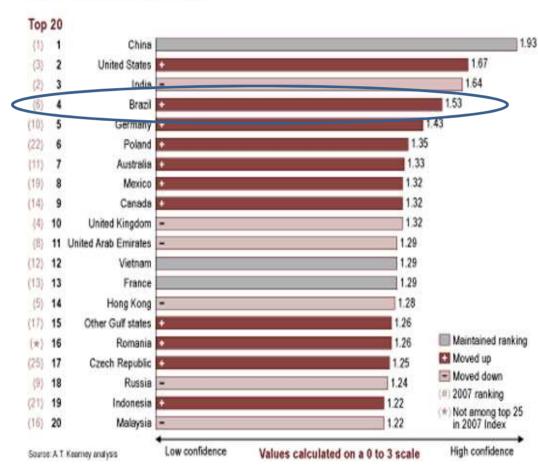
• More than **42%** of the foreign direct investments in Latin America was received by Brazil in 2010, totaling USD 48,5 billions out of USD 113,2 billions



## About Brazil Economic Indicators

#### Investing in a Rebound – The 2010 A.T. Kearney FDI Confidence Index®

### 2010 FDI Confidence Index®



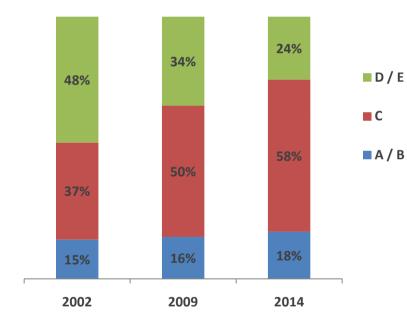
- China remains the top-ranked destination by foreign investors, a title it has held since 2002;
- The United States retakes second place from India, which had surpassed it in 2005;
- India, Brazil and Germany complete the top five favored investment destinations;
- At the same time, the placement of China, India and Brazil in the top five shows a strong vote of confidence for the strength of these economies;
- Investors also expressed the most optimism about the future outlook for China, India and Brazil.

Source: A.T.Kearney Analysis

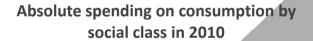


## About Brazil Social Indicators

#### Percentage of Economic classes in the Brazilian population



- Solid growth of middle class in the last 10 years
- High and middle class among 76% of total population
- High and Middle spending in consumption totaling 81%
  - Income concentration has declined

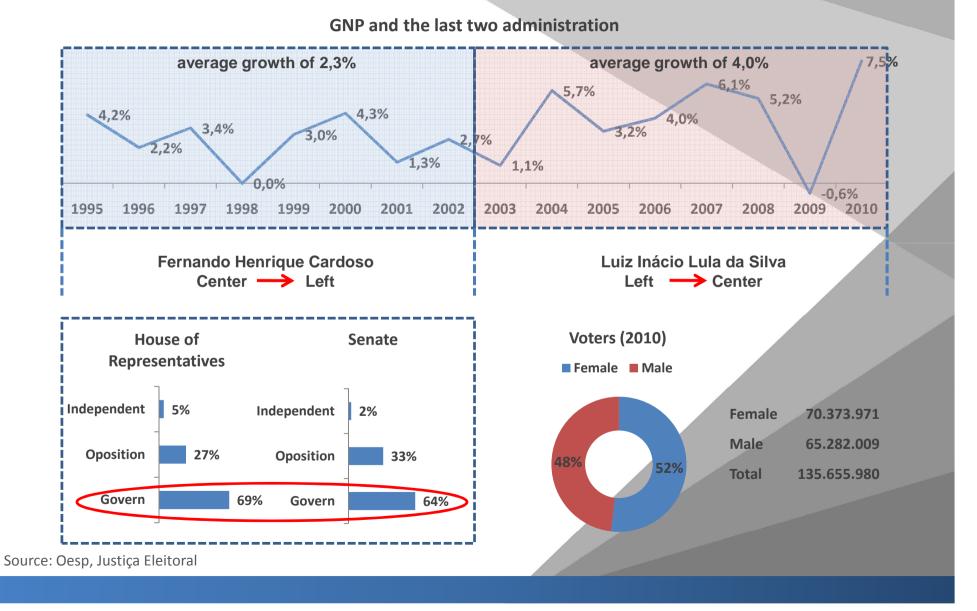




Source: Data Populare Kantar Worldpanel



## About Brazil Politic Indicators

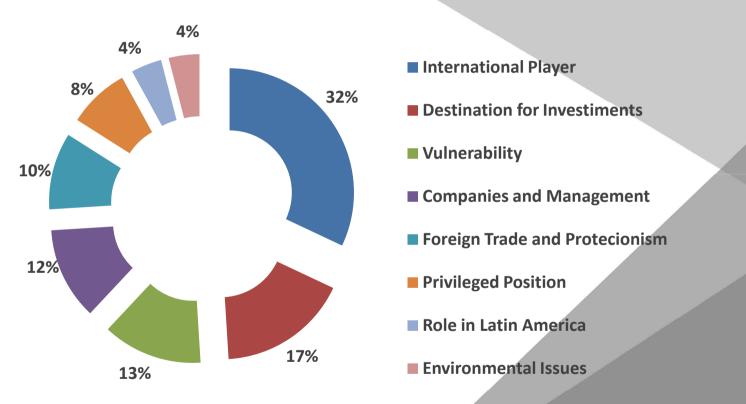




## About Brazil

### What the international media says about

The issues most discussed





## About Brazil

### Competitiveness - How the country is positioned ?

#### THE GOVERNMENT - BUSINESS EFFICIENCY GAP IN 2011

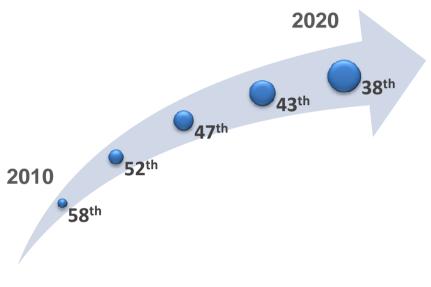
(Countries with at least a 6-rank difference: full list on the website)

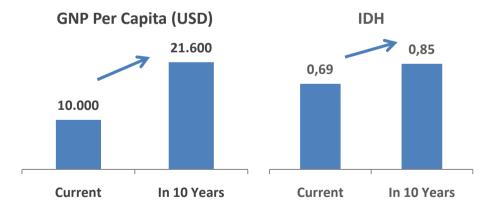
Country	Government Efficiency	Business Efficiency	Difference
Brazil	55	29	-26
Japan	50	27	-23
Belgium	39	23	-16
Ireland	30	18	-12
USA	19	10	.9
China	33	25	-8
Colombia	45	37	-8
Germany	24	16	-8
Austria	27	20	-7
Denmark	13	6	-7
India	29	22	.7
Taiwan	10	3	.7
Argentina	57	51	-6
Iceland	40	34	-6
Luxembourg	15	9	-6
Philippines	37	31	-6

The table above shows countries' rankings for Government Efficiency and Business Efficiency (two competitiveness factors drawn from the WCY 2011) and the gap between the two. All rankings are across 59 economies, in descending order from best (1<sup>st</sup>) to worst (59<sup>th</sup>).

- Global Competitiveness Index 2011 (World Competitiveness Yearbook), developed by the International Institute for Management Development (IMD)
  - Brazil drops six places in global competitiveness rankings
  - Fall in productivity and business efficiency and increase the cost of living have made up six positions and Brazil stays on the 44th among 59 countries assessed by the study







# Competitiveness - How to increase it ?

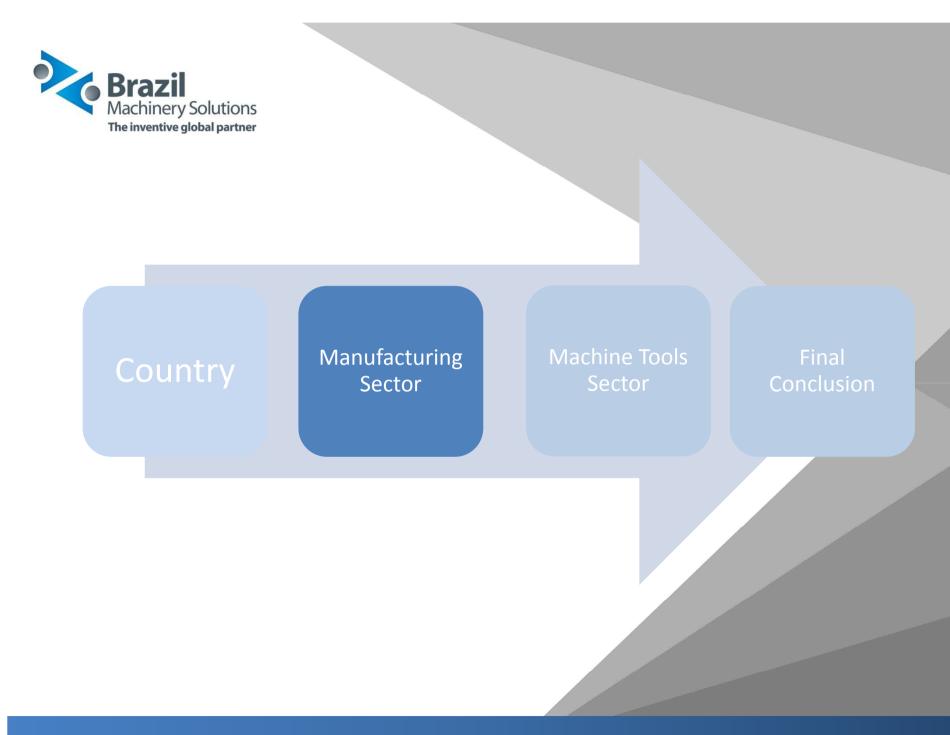
- Brazil needs a shock to accelerate competitiveness
  - increase of 6 positions with the elimination of infrastructure bottlenecks

**About Brazil** 

- increase of 5 positions with the rules clearer and more efficient government
- increase of 4 positions at simplifying taxes and reducing the tax burden
- increase of 4 positions with lower costs of hiring and firing
- advance of one position with the lower cost of capital

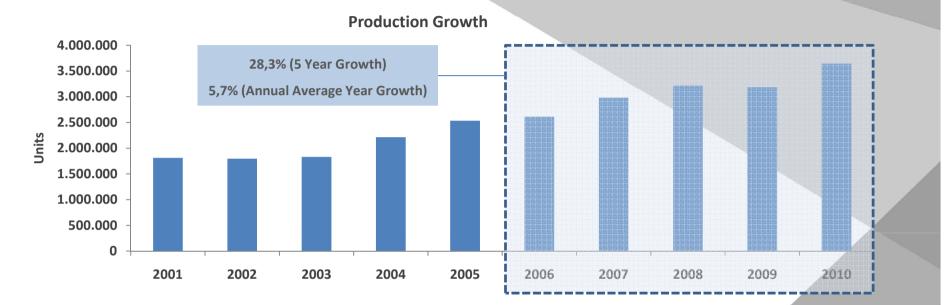
 In ten years, Brazil could achieve current income of Korea and the welfare near to Italy.

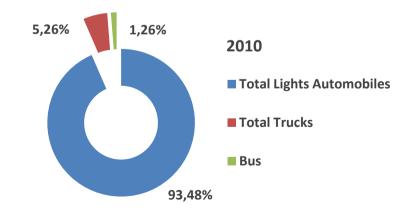
Source: World Economic Forum, Fundação Dom Cabral, LCA and World Bank





## Automotive Industry Production





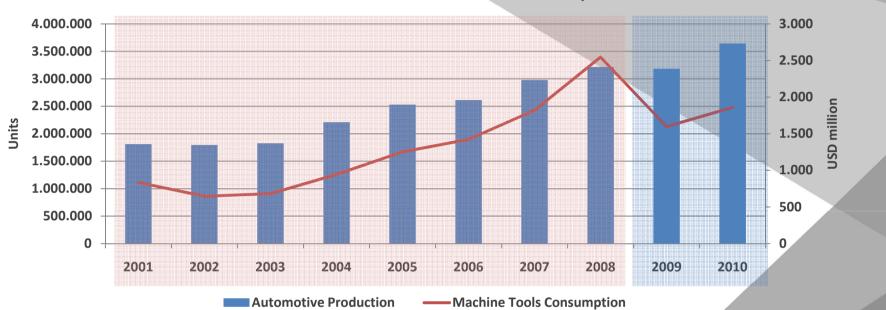
- 2010 Production
  - Totaling 3,6 million units
  - 93,48% automobiles
  - 5,26% trucks
  - 1,26% Bus
- Fleet of vehicles in the country reached 64.8 million in 2010, representing 119% growth in last ten years

How much it will keep growing to the next years ?

Source: Anfavea



## Automotive Industry Production



Automotive Production x Machine Tools Consumption

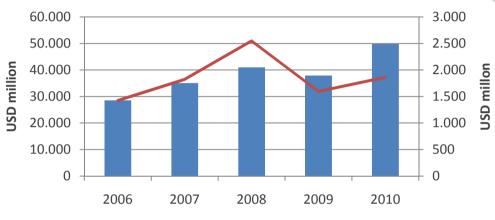
- Consumption of Machine Tools follows increase of automotive production until 2008
- Automotive production in 2009 and 2010 used production capacity already installed in the previous years
- 13,3% automotive production increase 2010 / 2008
- -26,9% machine tools consumption decrease 2010 / 2008
- Possible conclusion: substitution of local contents by imports following a high installed production capacity and the currency strength of R\$ real

Source: Anfavea, Abimaq



# Automotive industry

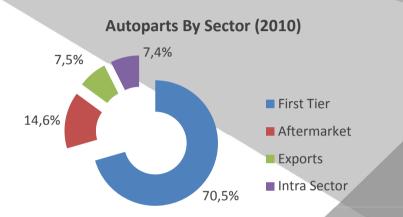
### Autoparts



Autoparts x Machine Tools



- 2010 Invoicing by sector totaling 49,76 USD billion
- Five year growth of autoparts invoicing was 42,6% against 23,5% for machine tools consumption;
- Average five year growth of autoparts invoicing was 8,5% against 4,7% for machine tools consumption
- Possible conclusion: substitution of local contents by imports following a high installed production capacity and the currency strength of R\$ real



	Autoparts Mac	<u>hine Tools</u>
USD millions	Invoicing Cons	sumption
2006	28.548	1.423
2007	35.064	1.822
2008	40.992	2.547
2009	37.895	1.597
2010	49.767	1.861

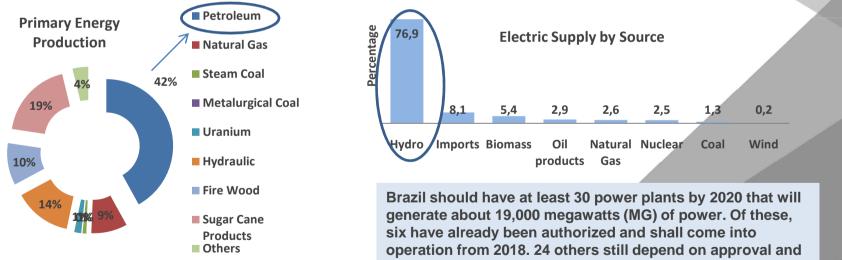
Source: Sindipeças and Abimaq



## Manufacturing Sectors

Energy

Investments of Petrobras	2011 - 2014	After 2014	Total
Exploration and Production	153,6	401	554,6
Refining, Transportation and Marketing and Petrochemicals	79	58	137
Natural Gas and Fertilizer	17	3	20
Biofuels	0,126	0	0,126
R\$ billions	249,726	462	711,726



are expected to start operating from 2016. The forecast is in the Ten Year Expansion Plan for Energy 2020 (PDE) announced by the Ministry of Mines and Energy on 2011.



# Manufacturing Sectors

Energy

### Parques eólicos previstos

164 projetos entram em operação até 2013\*\*



The wind energy projects in the country, with startup scheduled until 2013, is about R\$ 25 billion in investments, according to Abeeólica (Brazilian Association of Wind Energy). The projection considers developments auction (bids) winners in 2009 and 2010, the completion of Proinfa (program of alternative sources of government) and selling energy projects planned in the free market, which includes leading consumers.



## Manufacturing Sectors Capital Goods

Gross Fixed Capital Formation / GDP	2010	2011(e)	2012(e)
Credit Suisse	18,40%	19,60%	20,50%
Abimaq	18,40%	19,70%	
Ministry of Finance	18,40%	20,40%	21,60%
Brazilian Industry Machinery and Equipment	2010	2011(e)	2011 / 2010
Apparent Consumption (R\$ billion)	99 <i>,</i> 5	110,2	10,8%
Invoicing (R\$ billion)	71,9	77	7,0%
Exports (USD billion)	9,3	10,7	15,0%
Imports (USD billion)	25	31,5	26,0%

#### Abimaq represents 25 different industry sectors of capital goods, with over 1,400 members.

The investments in the capital goods sector should reach R\$ 4.8 billion in 2011 according to a forecast of the Brazilian Association of Machinery and Equipment (Abimaq). The number represents growth of 18.6% over the amount invested in 2010. According this forecast, investments in 2011 should not promote a large increase in capacity or even a large sector modernization and should represent about 5% of revenues of the sector and serve to maintain capacity and replace older machines.



## Manufacturing Sectors Other Relevant Sectors

Airspace (1)	Naval and Of
<ul> <li>Revenue of USD 7.1 billion (2009)</li> <li>88,1% aircrafts, 8,3% defense, 0.4% airspace and 3,.0% others</li> <li>79.3% of production to exports</li> <li>Main products are commercial airplanes , engines and maintenance</li> <li>Airspace: satellites of small sizes, survey missiles and launching equipment</li> </ul>	<ul> <li>About 25 ship five more une construction</li> <li>45,470 emploi 2010</li> <li>230 new vessible behalf of Pet investments in the period 2017</li> <li>By 2014, 146 the exploration offshore proto oil, with invest USD 5 billion</li> <li>By 2017, 40 r rigs will be in</li> </ul>

#### ffshore (2)

- ipyards and der
- loyees in
- sels on robras' is expected 2008 to
- 5 ships for ion and duction of estments of
- new drilling nstalled

#### Infrastructure (3)

- Investments of R\$ 6.8 billion are expected to modernize the airports to meet the demands of World Cup Soccer (2014) and the Olympic Games (2016)
- 265 port projects may require an estimate of \$42.8 billion in the coming years

Source: AIAB (1), Sinaval (2) and Infraero/Snea and Ipea (3)



### Manufactu Sector

### Machine Tools Sector

# Trends and Conclusion



## Machine Tools

## Footprint

		Production variety of machine to especially s and speci uses, based foreign technolog	ols, mall fic d on	vari tool lar uni s base	oduction iety of m s, from s ge sizes iversal a pecific u ed on loo foreign echnolog	achine small to , both nd for ises, cal and n		First NC machine tools is designed and produced Manufacture of NC machines in the country using local technology		
	1860		1940			19	60	1972	2010	
	Eccentric Press for coinage is the first type of machine tools known as produced in		Start o productio machine to industrial s including I sizes	n of ols in scale, arger		of fo manuf	ishment oreign acturers nine tools		Brazil is among the 10 largest producers of machine tools in the world	
	Brazil		First expor made to S Americ Countri	outh a	19		teel, Oil and	estments for Iron, d Hydroelectric Production		
					Auton industr wi	nobile y starts				
Source:	Abimaq, Indúst	trias Romi S.A.								



50%

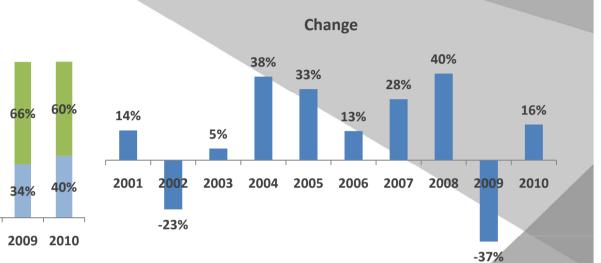
50%

43%

**57%** 

2004

## **Machine Tools Apparent Consumption**



Production Imports

2005 2006

**Apparent Consumption** 

49%

51%

44%

**56%** 

45%

**55%** 

2007 2008

58%

42%

60%

40%

66%

34%

(USD million)

2001 2002 2003

56%

44%

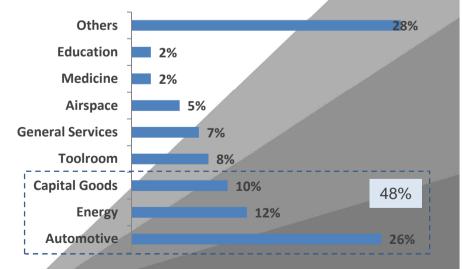
61%

39%

Year	Production	Exports	Imports	Apparent Consumption	Change
2001	447	118	506	835	14%
2002	382	99	364	647	-23%
2003	472	129	339	682	5%
2004	713	178	409	944	38%
2005	860	220	613	1.253	33%
2006	956	153	619	1.422	13%
2007	1.157	149	813	1.821	28%
2008	1.288	196	1.454	2.546	40%
2009	714	145	1.029	1.598	-37%
2010	837	100	1.124	1.861	16%

Source: Abimaq

**Consuption by Sector** 





## Machine Tools Consumption Per Capita

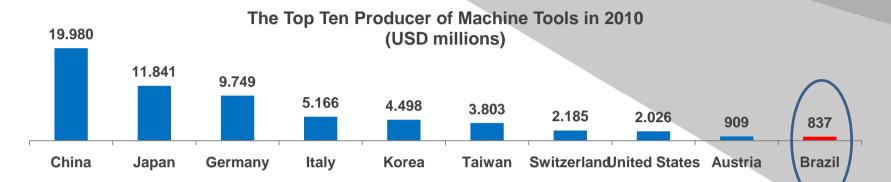
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120,00																		_						1	Switzerland	10	8,40	
120,00																								2	Korea	8	7,90	
400.00																								3	Taiwan	6	5,53	
100,00																								4	Germany	6	1,14	
ŋ																								5	Austria	5	9,39	
00,08 <b>Ber Capita</b>																		6	Italy	4	7,63							
Cal																		7	Japan		4,98							
<b>b</b> 60,00	┤▋┨┨┍																8	Sweeden	2	8,05								
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																								12	Netherlands		8,78	
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																					_		•	14	Denmark	1	4,93	
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										C	ر										$\supset$			21	Romania		9,19	
USD / Y	ear			2010			2013	3(*)			2	2016	(*)											22	Mexico		9,11	
Per Cap	ita			9,63			1	1,8				14,	93											23	Portugal		9,03	
Position				20				17					14											24	United States		8,96	
				20																				25	Russia		8,88	
Increase								),23					27											20	United			
Consum	ption	1.861	309	9.000	2	.28	0.731.	693	2	2.88	5.7	05.4	38											26	Kingdom		6,57	
										(*) a	122	ımpti	on											27	Argentina		3,45	
										( ) 0			5.1											28	India		1,50	

Source: Abimaq, Gardner Publications (preliminary)



# Machine Tools

### Production



#### Highlights of the world's machine tools in 2010

The machine tool manufacturers in countries around the world have increased their output by about 21% over 2009;

The world production of machine tools totaled USD 66.5 billion, compared to USD 54.7 billion in 2009;

Sales of machine tools in China rose 31% to nearly USD 20 billion in 2010, consolidating the country as the world's largest manufacturer since 2009;

In 2010, the machine tool industry in Japan has recovered after suffering a decline in 2009 69% (in U.S. dollars), recovering the position of vice world leader;

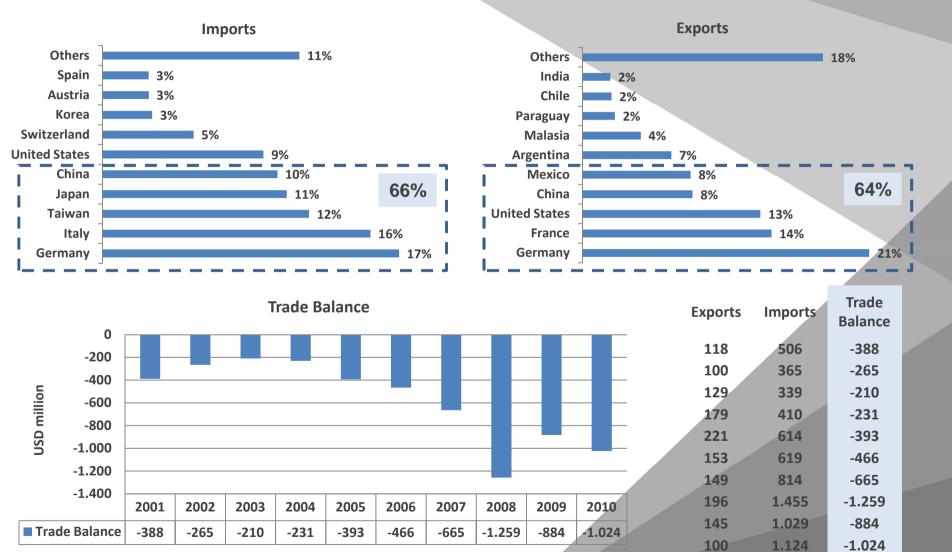
Germany, remains in third place, even with a drop of 5%, with USD 9.7 billion compared to USD 10.8 billion in 2009;

The U.S. (USD 2.0 billion) reduces 9% and drops to eighth place after Italy (USD 5.1 billion), Korea (USD 4.4 billion), Taiwan (USD 3.8 billion) and Switzerland (USD 2.1 billion).

Source: Abimaq, Gardner Publications (preliminary)



## Machine Tools Imports, Exports and Trade Balance

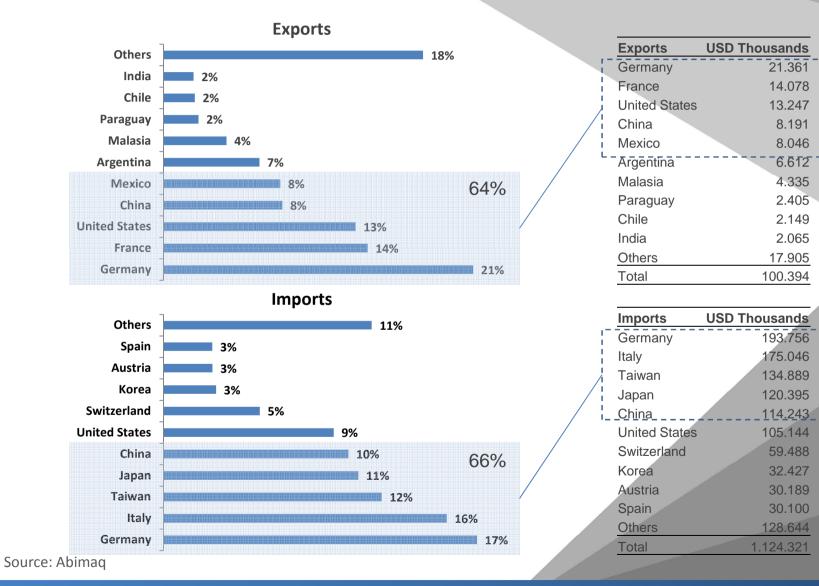


Source: Abimaq



# Machine Tools

### Imports, Exports and Trade Balance

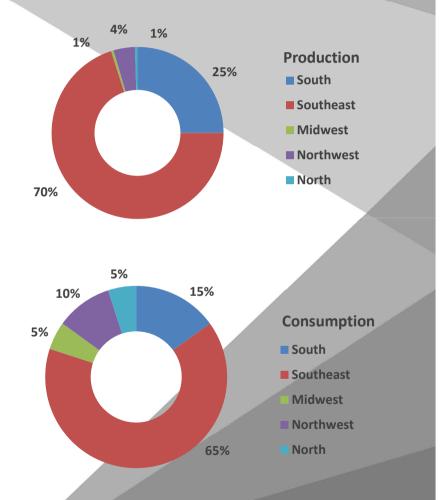




## Machine Tools By geographic region



	South	Southeast	Midwest	Northwest	North
Production	25%	70%	1%	4%	1%
Consumption	15%	65%	5%	10%	5%



Source: Abimaq



## Machine Tools New Branding





- New branding for Brazilian machinery
  - [1] Part of the country's flag is to transmit the idea of two people getting and interacting together
  - [2] Name of the country
  - [3] Message to reinforce core values





Case Study: Indústrias Romi S.A.





## Machine Tools Indústrias Romi S.A.

### **Company Highlights**

- Our competence: Machine Tools, Plastic Processing Machines and Iron Castings
- Manufacturing Plants in Brazil and Italy, with more than 170,000 *m2* of floor space and technical Centers in the USA and Europe
- 3,000 employees, around 260 (8.6%) assigned to product engineering and design
- Net Operating Revenue of R\$ 673 million (FY2010)
- Consistent investment in R&D of 4.0% / yearly
- 65% of the Net Operating Revenue from products developed within the last 3 years (FY2010)
- 80 years of existence (1930 2010)
- Public listed company on the BOVESPA (São Paulo, Brazil) stock exchange

### **Business Strategy**

- High level of business integration from the design, production, sales and distribution to service
- High level of production integration from casting, machining, software and hardware for electric and electronic panels and assembling
- High scale production
- High level of commitment and responsibility to all stakeholders
- To be close to the market worldwide
- Geographic expansion in and out Brazil, both organic and acquisition

### **Branding Utility**

 Reliable products designed and manufactured with leading edge technology and continuously supported

Source: Indústrias Romi S.A.



Footprint

1930	1942		1972		2007	2010	
The company is founded under	Production of lathe #1000 and	IP	Initial Public Offering – IPO and the start up of Plastic Injection Molding Machines production		Follow on and entering at Novo Mercado - high Corporate Governance standards	Romi Celebrated 80 years of existence	
the innovating spirit of Américo Emílio Romi	inauguration of a new plant with 15,000 m <sup>2</sup> of built area					and reached the 150,000th machine produced	

## Industrial Pioneering and Innovation in Brazil

1934 First to make plows in mass production scale



1941 First mechanical lathe

1948 First tractor

ctor

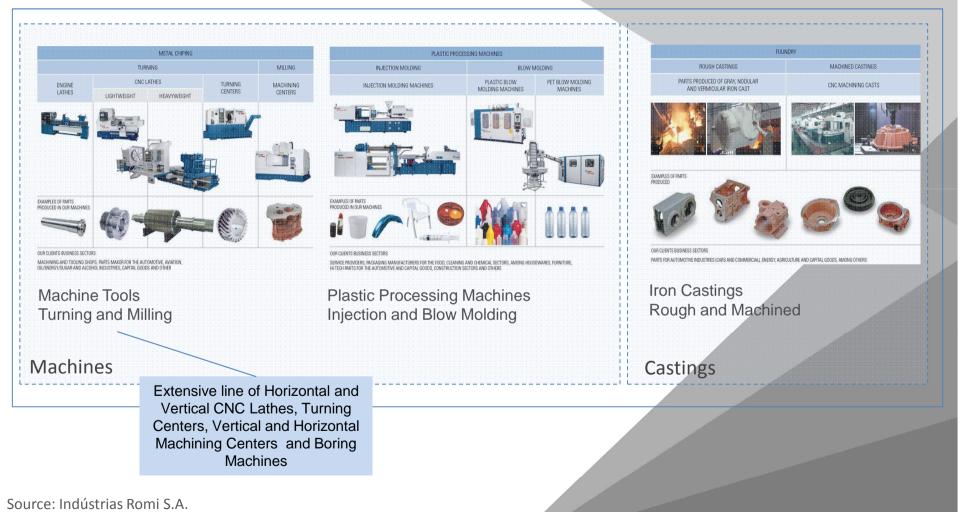
1956 First automobile made in production scale 1972

First NC lathe





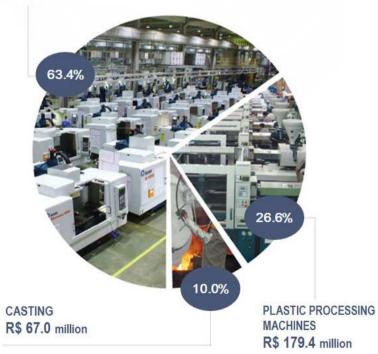
## **Business Units**

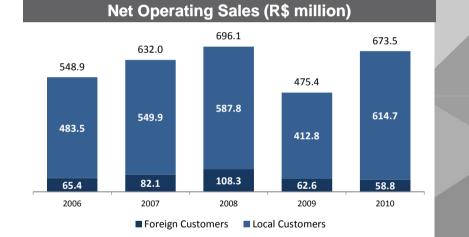




2010 Figures

MACHINE TOOLS R\$ 427.1 million



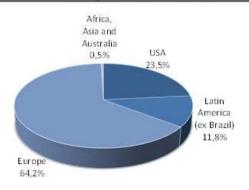




#### 2010 Figures

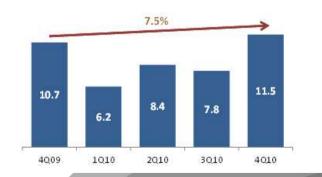


4T10 Foreign Sales Destination



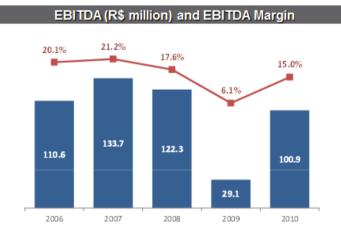


#### Quarter Foreign Sales – US\$ million



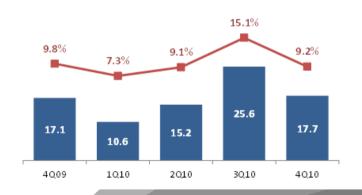


## 2010 Figures





# Net Profit (R\$ million) and Net Margin





#### Lean Six Sigma strategy

Since 2008, Romi has adopted the Lean Six Sigma methodology, seeking permanent quality and process improvements, cost efficiency and reduction of non-conformity and waste. The methodology is used both in the administrative as well as in the production processes of the company.

#### **Current figures**

**Projects:** 

- 308 ongoing Lean Six Sigma projects
- 489 implemented Lean Six Sigma projects

#### Personnel:

- 1 full time certified Master Black Belt
- 6 full time certified Black Belts
- 55 employees trained as Black Belts
- 305 employees trained as Green Belts
- Approximately 1,000 trained Yellow Belt

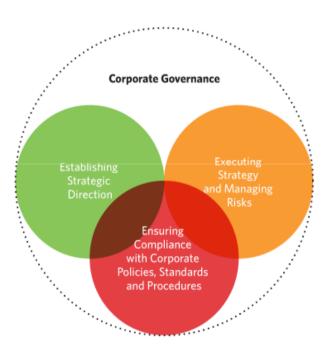


## Worldwide Presence





## **Corporate Governance**





Listed on the BOVESPA "Novo Mercado"

Machine Tools

Case: Indústrias Romi S.A.

IFRS Internation Internationa Accounting Standards Board

Accounting following IFRS - International **Financial Reporting Standards** 



Sustainability Index GRI - Global **Reporting Initiative** 









## Social Responsibility





To sponsor educational programs free to community for more than 50 years





To sponsor technical apprendiship programs for young students on mechanical, electrical, electronic, hydraulic and pneumatic

Source: Indústrias Romi S.A.

Machine Tools Case: Indústrias Romi S.A.



# ountry

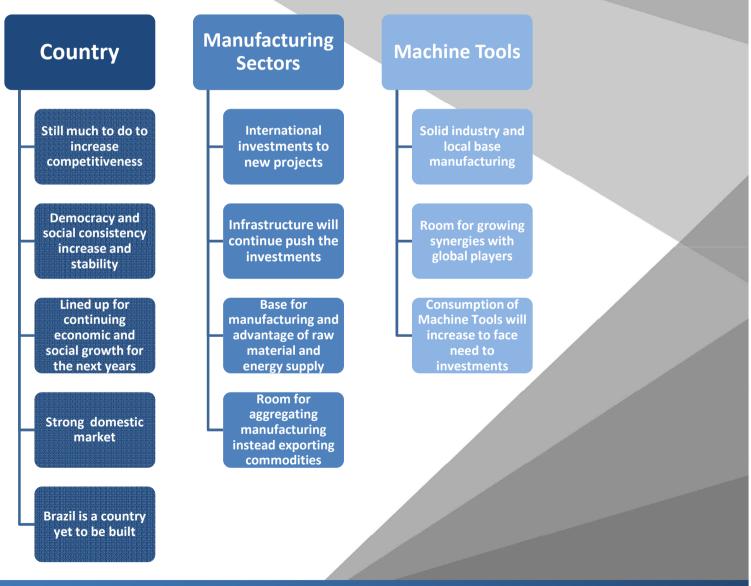
## Manufacturing Sector

Machine Tools Sector

## Final Considerations



# **Final Considerations**





## André Luís Romi

Abimaq Chairman of the Machine Tools Chamber

Indústrias Romi S.A. Institutional Relation Manager

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