

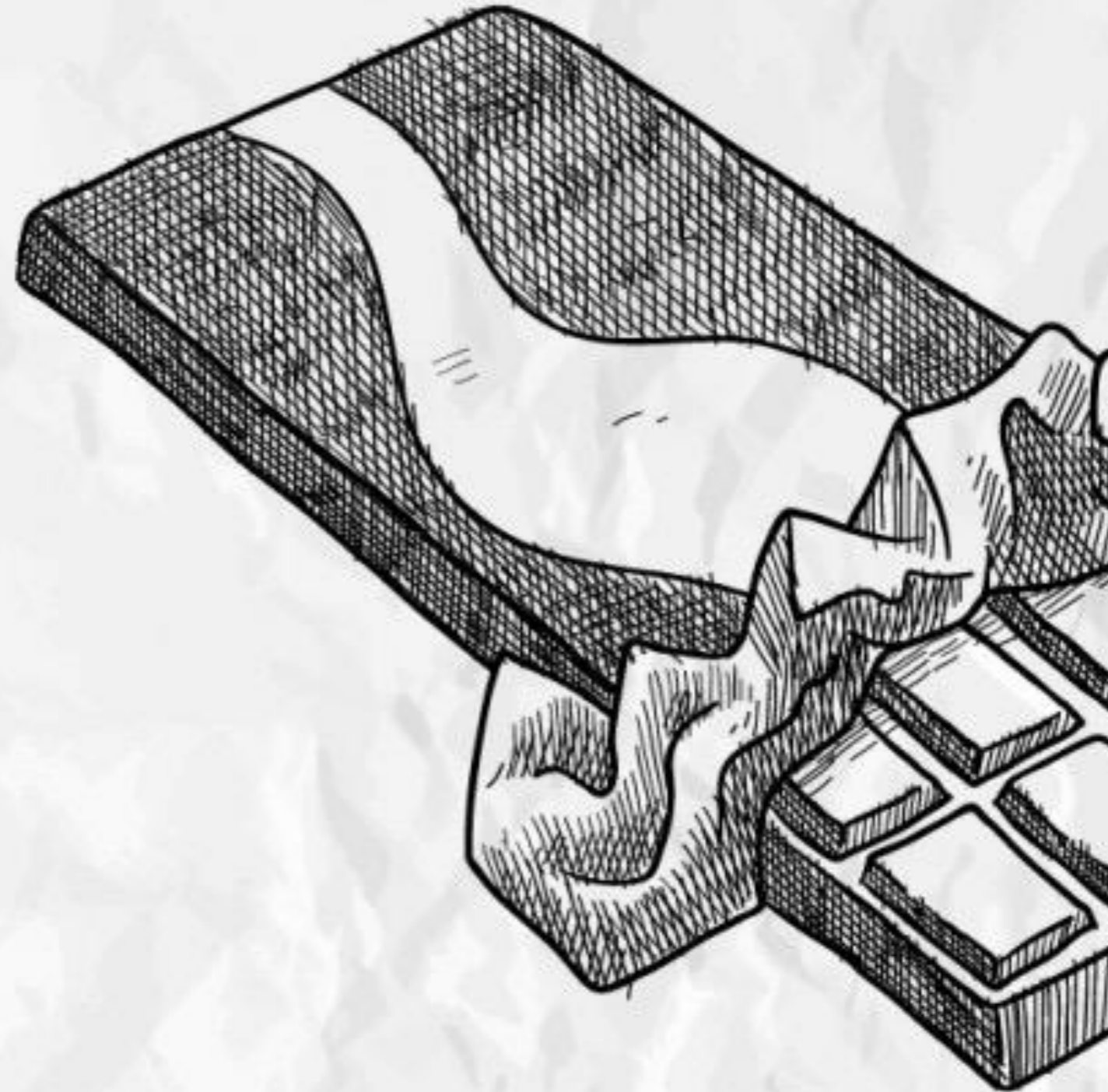


Brasil Chocolates.

Paulo Fonsêca Marinho Júnior

Brasil Chocolates. General Description

- **First Objective: Business Plan** - Work for a discipline Business Administration - Lecture by Prof. Dr. Ulrich Daldrup - WS 2016/17 - University of Applied Sciences FH Aachen.
- **Name:** Brasil Chocolates.
- **Type of Company:** Company with limited liability.
- **Liability:** Limited Liability.
- **Members:** Paulo Fonsêca Marinho Júnior, First Partner and Second Partner.



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Technical project description

- **Motivation and vision:** For present the next and for present myself. Outside the traditional dates like a Easter, Mother's Day, Father's Day, Valentine's Day, Children's Day, Birthdays and others the chocolate in Brazil is considered a excellent present and a product consumed throughout the year.
- **Market Competition:** The big names at industry of chocolates in Brazil are: Cacau Show, Brasil Cacau, Garoto, Nestle and Lacta. The big market and largely unexplored.
- **Availability:** The company is limited liability and still need the two partners.
- **Right of Ownership:** The profits will be divided common way to the three owners.
- **Marketing Planning:** Facebook, twitter, instagram and all other relationships redes free.



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The Place.

- This business will be built in the city of Brumadinho, MG - Brazil. A mid-sized city where squatter meters is sold for 150 reais; notorious value beyond not no other company in the industry in this same location. This city annually receives thousands of people due to the fact of it being the largest open air museum in the world: INHOTIM, another factor in which helped a lot in choosing the site, since we can take advantage of that to sell even more chocolate and disseminate the brand name worldwide.



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The Real

- To the database of this work I use in the calculations the money Brazilian currency basis: the Real. The Real being the 16th and the most traded currency in the world, is the second most traded in Latin America and the fourth most traded in the Americas. Nowadays 1 Euro is equivalent on average to 4.2 Reais.



Calculation of the Investments and Depreciation Costs

Discription	Amounts of Investment in R\$ (reais)	Depreciation in years	Depreciation in R\$ p.a.
Property/estate/plot 30,000 m2 (size based in factory example in Düren, Germany) to 250 reais (The media price to m2 in Brumadinho, Brazil).	4.500.000,00	0	0,00
Additional expenses in 5% Tax (base comum in Brazil) and 3% other costs (notary, registration, etc).	360.000,00	0	0,00
SUM PURCHASE OF LAND	4.860.000,00	0	0
Exterior Installations:			
Grading Work	300.000,00	20	15.000,00
Roads	150.000,00	20	7.500,00
Foundations	200.000,00	20	10.000,00
Outside Lights	50.000,00	20	2.500,00
Fence	50.000,00	20	2,500,00
Drains	200.000,00	20	10.000,00
Cables for Power Installations	50.000,00	20	2.500,00
Accessories for safety	100.000,00	20	5.000,00
TOTAL OF EXTERIOR INSTALLATIONS	1.100.000,00		55.000,00

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Investments and Depreciation Costs

Investment Calculation: Buildings

Description Plant	Invesments sums	Depreciation/Year	Depreciation
Building:			
Administration building	1.500.000,00	20	75.000,00
Gatehouse	100.000,00	20	5.000,00
Auxiliary building	180.000,00	20	9.000,00
Workshop	150.000,00	20	7.500,00
Production Hall	1.200.000,00	20	60.000,00
Downtown Covenience	70.000,00	20	3.500,00
Store	100.000,00	20	5.000,00
SUM of BUILDING	3.300.000,00		165.000,00

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Investment Calculation: Buildings

Investment Caculation: Machinery

Machinery	Investment Sums	Depr./Years	Depreciation
Roasting:			
Roasting Machine	375.000,00	10	37.500,00
Fallow	250.000,00	10	25.000,00
Separator	187.500,00	10	18.750,00
Cocoa Mill	187.500,00	10	18.750,00
K-rolling Mill	312.500,00	10	31.250,00
SUM of Machinery	1.312.500,00		131.250,00

PS: Like all machines will be imported from Germany, used as database the prices for the German machinery multiplied by 5, this for to include the conversion of currency more spending on transport all machines.

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Investment Calculation: Machinery

Investment Calculation: Processing

Processing of raw materials	Investment	Depreciation in years	Depreciation costs
Sugar silo	15.000,00	10	1.500,00
Sugar Mill	40.000,00	10	4.000,00
Milk powder silo	10.000,00	10	1.000,00
Cocoa butter Silo	5.000,00	10	500,00
SUM of Processing of Raw Materials	70.000,00		7.000,00

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Investment Calculation: Processing

Investment Calculation: Chocolate Production

Chocolate Production	Investment	Depreciation in year	Depreciation Costs
1 Kneber	18.000,00	10	1.800,00
1 Mixer	13.000,00	10	1.300,00
2 rolling mills	50.000,00	10	5.000,00
2 conchen	130.000,00	10	13.000,00
Lecithin silo	6.000,00	10	600,00
Camp silo	3.000,00	10	300,00
Intermediate silo	20.000,00	10	2.000,00
Bar plant	1.500.000,00	10	150.000,00
5 luggage machines	700.000,00	10	70.000,00
Cartoning machine	5.000,00	10	500,00
Labelling machine	2.500,00	10	250,00
Palletization	2.500,00	10	250,00
SUM of PRODUCTION	2.450.000,00		245.000,00

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Investment Calculation: Chocolate Production

Investment Calculation: Off-Sites, Engineering and Vehicles

Offsites/ Extra Investment	Investment	Depreciation in Years	Depreciation Costs
Tools	300.000,00	10	30.000,00
Square parts	100.000,00	10	10.000,00
Equipament Camp	100.000,00	10	10.000,00
Supply Lines	100.000,00	10	10.000,00
Waste water purification - In Brazil this price is very cheap comparatively to the Germany	500.000,00	10	50.000,00
Transportation/assembly inclusive	300.000,00	10	30.000,00
SUM of OFFSITES	1.400.000,00		140.000,00
Expenditure/planning -	240.000,00	10	24.000,00
Licenses	100.000,00	10	10.000,00
SUM of ENGINEERING	340.000,00		34.000,00
Vehicles			
2 passengers cars - The price of cars general in Brazil is more expensive comparable of Germany	70.000,00	5	14.000,00
1 Truck	100.000,00	5	54.000,00
SUM of VEHICLES	170.000,00		34.000,00

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Investment Calculation: Off-sites, Engineering and Vehicles

Calculation that the Total Investment and Depreciation Costs

Investment goods	Investment Expenditures	Depreciation in %	Depreciation Costs
Property	4.500.000,00	0	0,00
Exterior installations	1.100.000,00	5	55.000,00
Building	3.300.000,00	5	165.000,00
Machines	1.312.500,00	10	131.250,00
Production plants (chocolate)	2.450.000,00	10	245.000,00
Off-sites	1.400.000,00	5	140.000,00
Engineering	340.000,00	10	34.000,00
Vehicles	34.000,00	20	170.000,00
Transport costs of the plant	0,00		0,00
Assembly of the plant	0,00		0,00
Unexpected	1.000.000,00	0	0,00
Circulating Capital	641.000,00	0	0,00
Total Investment	16.077.500,00		940.250,00

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Total Investment and Depreciation Costs

Calculation of Consumption Costs

Expendable Material	Specific Consumption per 100g chocolate	Specific price in real	Costs per quantity unit of bar to 100g
Raw materials (in g)			
Cocoa Mass	25	0,00085	0,02125
Cocoa Butter	5	0,0050	0,025
Sugar	50	0,0005	0,025
Milk powder	20	0,0003	0,006
Lecithin	0,1	0,0255	0,00255
Packing			
Staniol (g per bar)	3	0,0010	0,003
Agony impact (g per bar)	5	0,0045	0,0225
Cardboard of VE 40	0,23	0,1200	0,0276
Label	0,01	0,0050	0,00005
Utilities			
Energy, steam			0,01000
Selling			0,05000
Maintenance costs			0,00100
Administrative overhead costs			0,01200
SUM of raw material costs per 100g bar			0,20595

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Calculation of Consumption Costs

Calculation of Labour Costs

Personal in Cost Centre	Number	Personnel Direct Costs
Roesterei	2	85.000,00
Processing of raw materials	2	85.000,00
Chocolate production	2	85.000,00
Bar plant	3	130.000,00
Packing Machines	5	200.000,00
Kartonierer	2	85.000,00
Palletization	2	85.000,00
Doorman	1	40.000,00
Stock of raw materials	4	160.000,00
Packing	5	200.000,00
Administration incl Director General	7	800.000,00
Seeling	2	200.000,00
Driver	2	85.000,00
Total Labour costs (1 shift)		2.240.000,00

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Calculation of Labour Costs

Total of Investment and Financing

Total Investment	R\$16.077.500,00
40% own capital funds (shareholders equity)	R\$6.431.000,00
60% outside financing (bank loan)	R\$9.646.500,00

A bank loan or any other funding by a third party will be needed to finance 60% of the total investment. We assume a bank loan over a period of 10 years with constant annual loan redemption and 5% interest rate.

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Total of Investment and Financing

Calculation of Financing Costs: Interest Paid on Debt

Year	Balance of debt	Interest rate (%)	Interest Costs Paid p.a.	Repayment/Paying back loan p.a.
1	R\$9.646.500,00	5	R\$482.325,00	R\$964.650,00
2	R\$8.681.850,00	5	R\$434.092,50	R\$964.650,00
3	R\$7.717.200,00	5	R\$385.860,00	R\$964.650,00
4	R\$6.752.550,00	5	R\$337.627,50	R\$964.650,00
5	R\$5.787.900,00	5	R\$289.395,00	R\$964.650,00
6	R\$4.823.250,00	5	R\$241.162,50	R\$964.650,00
7	R\$3.858.600,00	5	R\$192.930,00	R\$964.650,00
8	R\$2.893.950,00	5	R\$144.697,50	R\$964.650,00
9	R\$1.929.300,00	5	R\$96.465,00	R\$964.650,00
10	R\$964.650,00	5	R\$57.879,00	R\$964.650,00
Total Interest paid			R\$2.652.787,00	
	Total Repayment			R\$9.646.500,00

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Interest Paid on Debt

Self Costs in Years 1 - 4

	1Year/per bar	1.Year	2.Year	3. Year	4. Year
Utilization of capacity (%)	60%	60%	80%	100%	100%
Quantity produces in bars	132.000.000	132.000.000	176.000.000	220.000.000	220.000.000
Costs	Costs Per bar of Chocolate	Costs per Year	Costs per Year	Costs per Year	Costs per Year
Depreciation costs	0,0074	940.000	940.000	940.000	940.000
Financing costs	0,0051	482.325	434.092,5	385.860	337.627,5
Labour costs	0,0170	2.240.000	2.240.000	2.240.000	2.240.000
Raw material & utilities costs	0,2136	39.595.400	49.459.200	63.324.000	63.324.000
Total of costs		33.256.725	43.073.292,5	52.889.860	52.841.627,5
Self costs per 100g bar	0,2431	0,2519	0,2447	0,2404	0,2402

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Self Costs in Years 1-4

Self Costs in Years 1 - 10

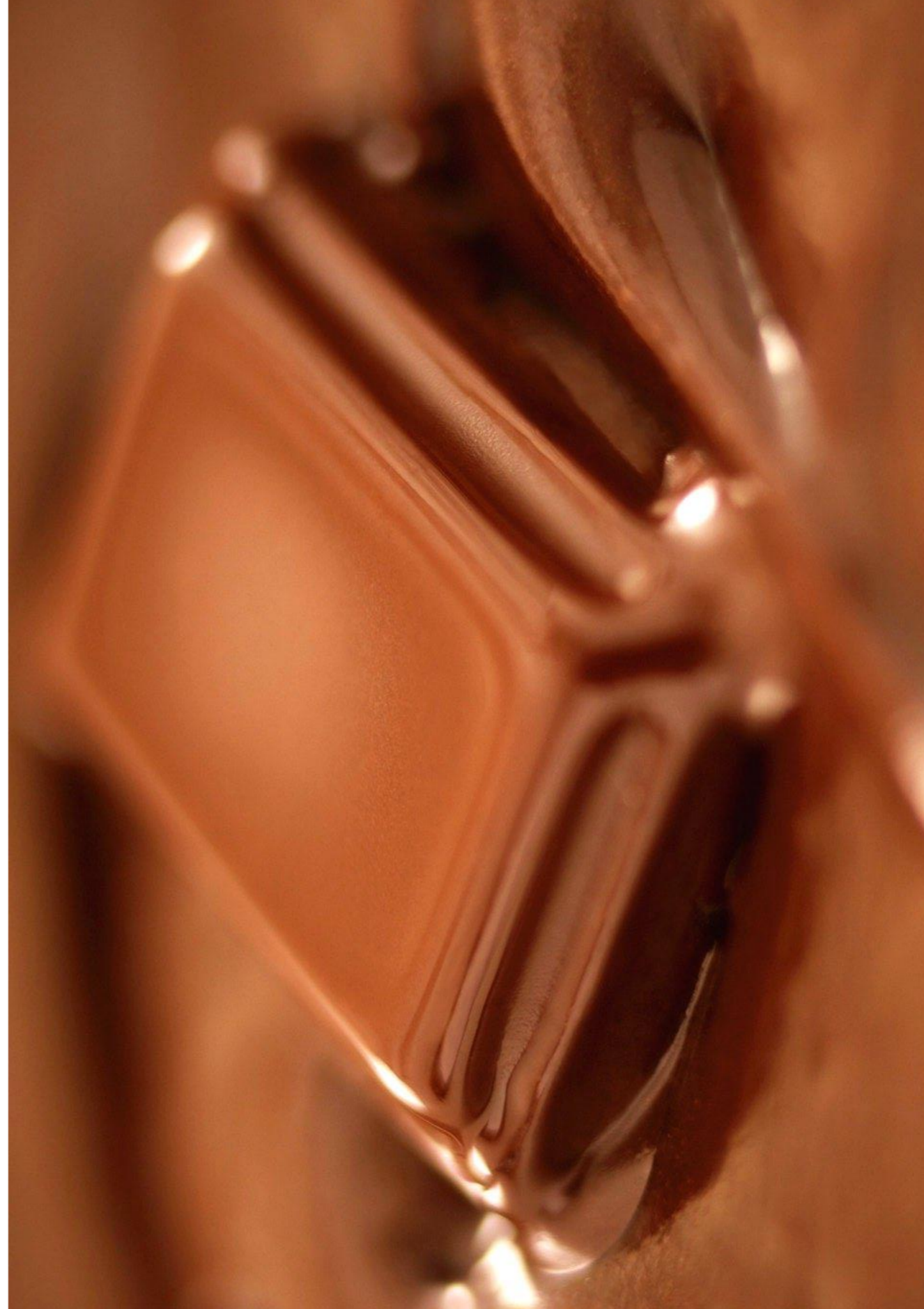
	1Year/per bar	1.Year	2.Year	3. Year	4. Year	5.Year	6.Year	8.Year	8.Year	9.Year	10.Year
Utilization of capacity (%)	60%	60%	80%	100%	100%	100%	100%	100%	100%	100%	100%
Quantity produces in bars	132.000.000	132.000.000	176.000.000	220.000.000	220.000.000	220.000.000	220.000.000	220.000.000	220.000.000	220.000.000	220.000.000
Costs	Costs Per bar of Chocolate	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year
Depreciation costs	0,0074	940.000	940.000	940.000	940.000	940.000	940.000	940.000	940.000	940.000	940.000
Financing costs	0,0051	482.325	434.092,5	385.860	337.627,5	289.305	241.162,5	192.930	144.697,5	96.465	57.879
Labour costs	0,0170	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000
Raw material & utilities costs	0,2136	39.595.400	49.459.200	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000
Total of costs		33.256.725	43.073.292,5	52.889.860	52.841.627,5	52.793.305	52.745.162,5	52.696.930	52.648.697,5	52.600.645	52.552.232,5
Self costs per 100g bar	0,2431	0,2519	0,2447	0,2404	0,2402	0,2400	0,2398	0,2395	0,2393	0,2391	0,2389

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Self Cost in Years 1 - 10

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- Definition of Price:
- The self for production of one bar of milk chocolate is:
 - 0,2519 in the first year of production;
 - 0,2389 in the last ten years of production;
- We decide to sell the chocolate at **0,3000** Reais, this price is very cheap for chocolates in Brazil, a fact which helped a lot to the **success of the product and the employment.**



Calculation of Turnover/Revenue

Year	Output	Price per bar	Turnover/Revenue
1	132.000.000	0,30	39.600.000
2	176.000.000	0,30	52.800.000
3	220.000.000	0,30	66.000.000
4	220.000.000	0,30	66.000.000
5	220.000.000	0,30	66.000.000
6	220.000.000	0,30	66.000.000
7	220.000.000	0,30	66.000.000
8	220.000.000	0,30	66.000.000
9	220.000.000	0,30	66.000.000
10	220.000.000	0,30	66.000.000

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Calculation of Turnover/Revenue

Cash Flow Calculation

	1. Year	2. Year	3. Year	4. Year	5. Year	6. Year	7. Year	8. Year	9. Year	10. Year
Turnover/Revenue	39.600.000	52.800.000	66.000.000	66.000.000	66.000.000	66.000.000	66.000.000	66.000.000	66.000.000	66.000.000
Depreciation Costs	940.000	940.000	940.000	940.000	940.000	940.000	940.000	940.000	940.000	940.000
Labour Costs	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000	2.240.000
Raw Material and utilities costs	39.595.400	49.459.200	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000	63.324.000
Financing Costs	482.325	434.092,5	385.860	337.627,5	289.305	241.162,5	192.930	144.697,5	96.465	57.879
Loss carried forward										
Profit before tax	3.657.725	273.292,5	889.860	841.627,5	793.305	745.162,5	696.930	648.697,5	600.465	561.879
Taxes (40%)	1.463.090	109.317	355.944	336.651	317.322	298.065	278.772	259.479	240.186	224.751,6
Profit after taxes	2.194.635	163.975,5	533.916	504.976,5	475.983	447.097,5	418.158	389.218,5	360.279	337.127,4
Cash-flow (net profit + depreciation costs)	3.134.635	1.103.975,5	1.473.916	1.444.976,5	1.415.983	1.387.097,5	1.358.158	1.329.218,5	1.300.279	1.277.127,4
Repayment credit	964.650	964.650	964.650	964.650	964.650	964.650	964.650	964.650	964.650	964.650
Dividend	2.169.985	139.325,5	509.266	480.326,5	451.333	422.447,5	393.508	364.568,5	335.629	312.477,4

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Cash Flow Calculation



Total dividend cumulated over 10
years: R\$ 5.578.866,40 reais

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Total Dividend

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Conclusions:

- The Brasil Chocolate is completely viable and profitable, since in 10 years the debt to the bank will be completely finished and we will have a dividend total of **R \$5.578.866,40 reais.**
- A good Business Plan it is the guarantee of success of the work.



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- Thanks a lot;
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