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New Balance Athletic Shoes
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Introduction

Demand for athletic running shoes has increased because of the growing popularity of running as a hobby. New Balance Athletic Shoes is in a position to leverage this trend and grow its market share by expanding operations while keeping its product quality high. Specifically, New Balance should increase production to a total of 1.8 million pairs in the next 3 years. A new production facility in Texas will be able to realize this goal of expansion, while maximizing strategic factors such as product quality and ability to expand to new markets.

Forecast Model

New Balance has seen major growth during the years of 1976 and 1977. Further growth is predicted to continue because of positive feedback on New Balance's products, especially the 320 sneaker. Currently, a graphical display of the actual production data from 1976 and 1977 (Exhibit A) reveals an exponential trend in growth. This is due to overall growth in the running shoe market and because of the 320 sneaker's spot as the #1 shoe for 1976, according to *Runner's World* magazine.

The 3-year forecast for 1978 to 1980 is more conservative, however. One major reason for using a conservative forecast is due to the 320 falling in ranking from #1 to #8 in just one year. Competitive products from Brooks, Nike and Adidas have made constant innovation and improvements to sneakers necessary to remain competitive. New Balance's competitive advantage has been the availability of wide sizes, however other companies, especially Brooks, have also begun to offer their shoes with different widths. For these reasons, a production forecast beyond 1978 should begin to level out, rather than continuing the trend of exponential growth.

The forecast itself was generated using Microsoft Excel, using a sheet designed to create charts showing exponential smoothing with a damped trend. Production data from 1976 to 1977 were used as warm-up data from which the forecast could be generated. Exponential smoothing serves to reduce the effects of peaks and troughs of the data. A trend modifier of .95 was used on this data to make the forecast level off, rather than continue to grow (this "dampens" the trend). A modifier of 1.0 would mean we expect linear growth, and a modifier over 1.0 would mean we expect exponential growth. The modifier of .95 makes the forecast more conservative, which is appropriate due to the increased amount of competition that has entered the athletic shoe market.

Expansion of Operations – New Facility

New Balance has increased production output from 157 pairs a day in January 1976 to 1,628 pairs in December 1977. However, even with a ten-fold production increase, backorders are still prevalent. A new facility in Texas will allow New Balance to expand its production capacity and enter new markets, while still maintaining the high product quality that consumers demand.

The three possible locations for a new facility in Massachusetts, Texas, or Ireland have been compared using dimensional analysis in Exhibits B and C. The analysis uses operational, financial, risk, and strategic factors that are of high importance to the company. Notable factors include production capacity, warehouse costs, ability to maintain product quality, and ability to expand into new markets. These factors have been given the highest weight of 5. Ratios are then taken from the different factors and their weights, and multiplied to find a *preference number*, which is the numerical score used to make the decision. In this case, if the *preference number* is less than 1, option A will be chosen, else option B is chosen.

The Massachusetts and Texas locations were compared first because they have more of the same type of data available. Specifically, the cost per foot and wage rates of the facility were able to be directly compared. Additionally, both locations would be leased by New Balance. The international location would need to be purchased, and so cost was compared using an 8 year cost of ownership, rather than cost per square foot.

Exhibit B shows that Texas is the preferred choice when compared to Massachusetts. The biggest determining factor in the decision was the ability to expand into new markets. Data shows that running is more popular on the West coast than the East coast, so a Texas location allows New Balance to move its distribution closer to the West. Keeping production in Massachusetts, while much less risky, centralizes production, when strategically New Balance wishes to begin to expand. Both facilities had similar costs and wage rates, as well as skilled workers, so these factors did not have a large impact on the decision.

After choosing Texas out of the domestic options, the facility was compared with Ireland. Once again, Texas was determined to be the preferred choice. In this case, the biggest factor in the decision was the ability to improve the delivery network. New Balance already faces a domestic backlog of orders due to the popularity of the 320 sneaker. Although expanding abroad is in line with New Balance’s strategic goal of market expansion, it does not address the current delivery problems facing the company domestically.

Summary

New Balance is expected to need to produce at least 58,000 pairs per month as soon as 1981. A new facility in Texas will expand production capacity by a maximum of 90,000 pairs per month, while maintaining a high level of product quality and improving New Balance's delivery network. The Texas facility will also allow the company to expand its market into the West coast, where running has become increasingly popular. A good economic climate in Texas, paired with ample amounts of experienced workers will also help to ensure the economic success of the new facility. In the future, the production forecast can be generated again with new data and modifiers if the athletic shoe market begins to change.

Exhibits

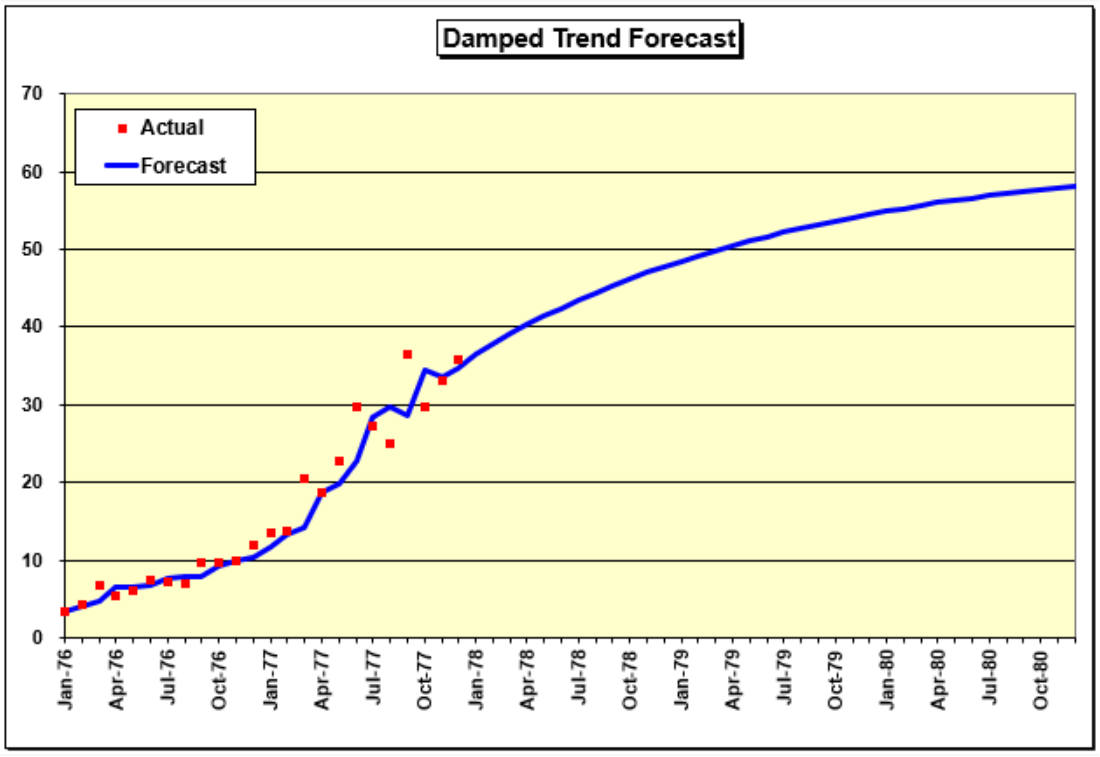

Exhibit A

Lawrence, MA vs Texas

PREFERENCE NUMBER: 72.69
DECISION: TX

DECISION FACTORS	SCORES A	B	W	A/B	(A/B)^W Weighted
OPERATIONAL:	**MA**	**TX**	**Weight**	**Ratio**	**ratios**
Production Capacity (pairs/day)	**3000**	**3000**	**-5**	1.00	1.00
Plant Size (sq. ft.)	**43000**	**40000**	**-3**	1.08	0.80
FINANCIAL:					
Warehouse Cost ($/sq ft.)	**$0.85**	**$0.95**	**5**	0.89	0.57
Equipment Cost	**$100,000.00**	**$100,000.00**	**3**	1.00	1.00
Wage Rates	**0.9**	**0.75**	**3**	1.20	1.73
Material Costs & Overhead	**1**	**1.02**	**2**	0.98	0.96
RISKS:					
Local government attitude	**2**	**3**	**3**	0.67	0.30
Lease term	**3**	**8**	**2**	0.38	0.14
Ability to hire experienced workers	**2**	**3**	**4**	0.67	0.20
Distance from Boston	**1**	**5**	**1**	0.20	0.20
STRATEGIC:					
Ability to expand into new markets	**8**	**3**	**5**	2.67	134.85
Ability to maintain product quality	**3**	**2**	**4**	1.50	5.06
Current popularity of running	**5**	**3**	**2**	1.67	2.78
Ability to improve delivery network	**9**	**3**	**2**	3.00	9.00

Exhibit B

International vs Texas

PREFERENCE NUMBER: 28.30
DECISION: TX

DECISION FACTORS	SCORES A	B	W	A/B	(A/B)^W Weighted
OPERATIONAL:	**International**	**TX**	**Weight**	**Ratio**	**ratios**
Production Capacity (pairs/day)	**3000**	**3000**	**-5**	1.00	1.00
Plant Size (sq. ft.)	**30000**	**40000**	**-3**	0.75	2.37
FINANCIAL:					
Warehouse Cost After 8 Years	**$198,000.00**	**$304,000.00**	**5**	0.65	0.12
Equipment Cost	**$90,000.00**	**$100,000.00**	**3**	0.90	0.73
Material Costs & Overhead	**1.03**	**1**	**2**	1.03	1.06
RISKS:					
Local government attitude	**1**	**3**	**3**	0.33	0.04
Lease term	**10**	**8**	**2**	1.25	1.56
Ability to hire experienced workers	**4**	**3**	**4**	1.33	3.16
Distance from Boston	**8**	**5**	**1**	1.60	1.60
STRATEGIC:					
Ability to expand into new markets	**2**	**3**	**5**	0.67	0.13
Ability to maintain product quality	**3**	**2**	**4**	1.50	5.06
Current popularity of running	**5**	**3**	**2**	1.67	2.78
Ability to improve delivery network	**9**	**3**	**2**	3.00	9.00

Exhibit C