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# DIAPER COST ANALYSIS:

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WHAT IS THE CHEAPEST WAY  
TO PURCHASE DISPOSABLE DIAPERS?

DECEMBER 2012

FAMILYCONSUMERSCIENCES.COM

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## INTRODUCTION

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Having a child is expensive no matter what study you look at. A major expense of course is diapering the child. In recent years strong competition has come from manufacturers, retailers, and dotcoms to acquire the coveted loyalty of new moms. This diaper analysis compares these leading diaper savings retailers and programs: Amazon Mom, Sam's Club, Stop & Shop, and Babies "R" Us VIB program.

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## METHODOLOGY

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- Determine the average number of diapers used per day by age group.
- Determine the average number of months a child uses a specific size diaper by average child's weight.
- Gather data on price, quantity, regular price, and discount/subscription price.
- Determine the cost per diaper.
- Determine the cost per period of time in selected size diaper.
- Determine the cost of subscription or membership per period of time in selected diaper size.
- Total costs over 3 years. Add wipe expense. Grand total.
- Subtract out alternate movie subscription 3yr cost if Amazon Prime would replace that expense.
- Compare terms & conditions and other features of each program/subscription service

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## ASSUMPTIONS

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- One month in this study is equal to 30 days.
- Age 3 is the average age of transition from diapers to full time toilet use.
- Based on multiple sources, on average, wipes cost \$20/month.
- No other diaper changing costs are part of this study.
- Babies use less diapers over time with a range of 10 diapers a day as a newborn to an average of 6 diapers a day to age 3.

## DATA COLLECTION

### Size 1 (8-14lb child)

Average Diapers Used 10 Per Day  
Birth- 3 Months 3 Months

	Amazon Mom		Sam's Club		Stop & Shop		Babies "R" Us VIB	
Brand/Product	Pampers: Swaddlers		Pampers: Swaddlers		Pampers: Swaddlers		Pampers: Swaddlers	
Available Quantity/Pkg	234		210		108		210	
Regular Price/Pkg	\$ 46.99	\$ 46.99	\$ 39.98	\$ 39.98	\$ 24.99	\$ 24.99	\$ 46.99	\$ 46.99
Cost per diaper	\$ 0.20	\$ 0.20	\$ 0.19	\$ 0.19	\$ 0.23	\$ 0.23	\$ 0.22	\$ 0.22
Discount/Subscription Price	\$ 37.59	\$ 37.59	-	-	-	-	-	-
Cost per diaper after discounts/subscriptions	\$ 0.16	\$ 0.16	\$ 0.19	\$ 0.19	\$ 0.26	\$ 0.26	\$ 0.20	\$ 0.20
Subscription Fee for 3YRS	\$ 239.97	\$ 239.97	\$ 120.00	\$ 120.00	\$ -	\$ -	\$ -	\$ -
Portion of Subscription/Membership Fee	\$ 20.00	\$ 20.00	\$ 10.00	\$ 10.00	\$ -	\$ -	\$ -	\$ -
Diaper Cost Per Time Period	\$ 144.58	\$ 144.58	\$ 171.34	\$ 171.34	\$ 234.00	\$ 234.00	\$ 181.25	\$ 181.25
<b>Total Cost</b>	<b>\$ 164.57</b>	<b>\$ 164.57</b>	<b>\$ 181.34</b>	<b>\$ 181.34</b>	<b>\$ 234.00</b>	<b>\$ 234.00</b>	<b>\$ 181.25</b>	<b>\$ 181.25</b>

### Size 2 (12-18lb child)

Average Diapers Used 10 Per Day  
4 Months-8 Months 5 Months

	Amazon Mom		Sam's Club		Stop & Shop		Babies "R" Us VIB	
Brand/Product	Pampers: Swaddlers		Pampers: Swaddlers		Pampers: Swaddlers		Pampers: Swaddlers	
Available Quantity/Pkg	204		186		100		186	
Regular Price/Pkg	\$ 47.19	\$ 47.19	\$ 39.98	\$ 39.98	\$ 24.99	\$ 24.99	\$ 46.99	\$ 46.99
Cost per diaper	\$ 0.23	\$ 0.23	\$ 0.21	\$ 0.21	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25
Discount/Subscription Price	\$ 37.75	\$ 37.75	-	-	-	-	-	-
Cost per diaper after discounts/subscriptions	\$ 0.19	\$ 0.19	\$ 0.21	\$ 0.21	\$ 0.26	\$ 0.26	\$ 0.23	\$ 0.23
Subscription Fee for 3YRS	\$ 239.97	\$ 239.97	\$ 120.00	\$ 120.00	\$ -	\$ -	\$ -	\$ -
Portion of Subscription/Membership Fee	\$ 33.33	\$ 33.33	\$ 16.67	\$ 16.67	\$ -	\$ -	\$ -	\$ -
Diaper Cost Per Time Period	\$ 277.57	\$ 277.57	\$ 322.42	\$ 322.42	\$ 390.00	\$ 390.00	\$ 341.06	\$ 341.06
<b>Total Cost</b>	<b>\$ 310.90</b>	<b>\$ 310.90</b>	<b>\$ 339.09</b>	<b>\$ 339.09</b>	<b>\$ 390.00</b>	<b>\$ 390.00</b>	<b>\$ 341.06</b>	<b>\$ 341.06</b>

### Size 3 (16-28lb child)

Average Diapers Used 8 Per Day  
9 Months- 14 Mths 6 Months

	Amazon Mom		Sam's Club		Stop & Shop		Babies "R" Us VIB	
Brand/Product	Pampers: Baby Dry		Pampers: Baby Dry		Pampers: Baby Dry		Pampers: Baby Dry	
Available Quantity/Pkg	222		222		112		204	
Regular Price/Pkg	\$ 48.51	\$ 48.51	\$ 42.96	\$ 42.96	\$ 24.99	\$ 24.99	\$ 46.99	\$ 46.99
Cost per diaper	\$ 0.22	\$ 0.22	\$ 0.19	\$ 0.19	\$ 0.22	\$ 0.22	\$ 0.23	\$ 0.23
Discount/Subscription Price	\$ 38.81	\$ 38.81	-	-	-	-	-	-
Cost per diaper after discounts/subscriptions	\$ 0.17	\$ 0.17	\$ 0.19	\$ 0.19	\$ 0.26	\$ 0.26	\$ 0.21	\$ 0.21
Subscription Fee for 3YRS	\$ 239.97	\$ 239.97	\$ 120.00	\$ 120.00	\$ -	\$ -	\$ -	\$ -
Portion of Subscription/Membership Fee	\$ 40.00	\$ 40.00	\$ 20.00	\$ 20.00	\$ -	\$ -	\$ -	\$ -
Diaper Cost Per Time Period	\$ 251.74	\$ 251.74	\$ 278.66	\$ 278.66	\$ 374.40	\$ 374.40	\$ 298.52	\$ 298.52
<b>Total Cost</b>	<b>\$ 291.74</b>	<b>\$ 291.74</b>	<b>\$ 298.66</b>	<b>\$ 298.66</b>	<b>\$ 374.40</b>	<b>\$ 374.40</b>	<b>\$ 298.52</b>	<b>\$ 298.52</b>

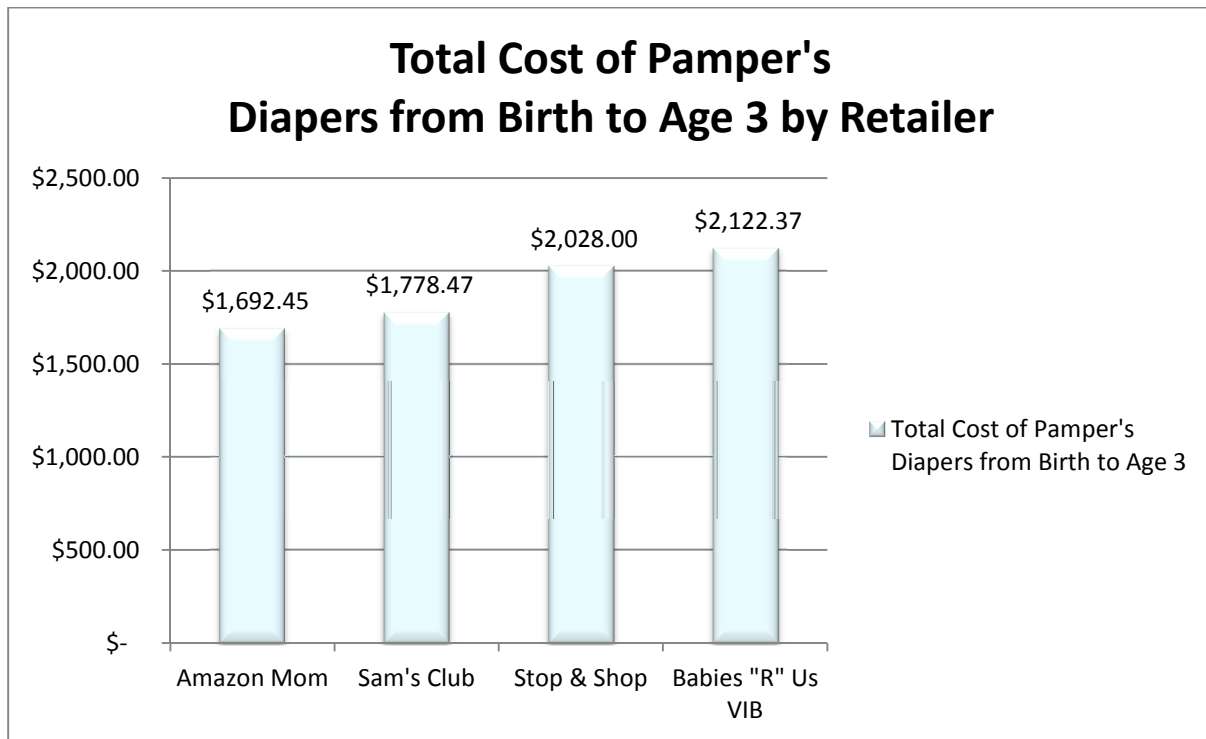
### Size 4 (22-37lb child)

Average Diapers Used 6 Per Day  
15 Mths -36 Mths (Age 3) 22 Months

	Amazon Mom		Sam's Club		Stop & Shop		Babies "R" Us VIB	
Brand/Product	Pampers: Baby Dry		Pampers: Baby Dry		Pampers: Baby Dry		Pampers: Baby Dry	
Available Quantity/Pkg	192		192		96		52	
Regular Price/Pkg	\$ 47.19	\$ 47.19	\$ 42.96	\$ 42.96	\$ 24.99	\$ 24.99	\$ 18.99	\$ 18.99
Cost per diaper	\$ 0.25	\$ 0.25	\$ 0.22	\$ 0.22	\$ 0.26	\$ 0.26	\$ 0.37	\$ 0.37
Discount/Subscription Price	\$ 37.75	\$ 37.75	-	-	-	-	-	-
Cost per diaper after discounts/subscriptions	\$ 0.20	\$ 0.20	\$ 0.22	\$ 0.22	\$ 0.26	\$ 0.26	\$ 0.33	\$ 0.33
Subscription Fee for 3YRS	\$ 239.97	\$ 239.97	\$ 120.00	\$ 120.00	\$ -	\$ -	\$ -	\$ -
Portion of Subscription/Membership Fee	\$ 146.65	\$ 146.65	\$ 73.33	\$ 73.33	\$ -	\$ -	\$ -	\$ -
Diaper Cost Per Time Period	\$ 778.59	\$ 778.59	\$ 886.05	\$ 886.05	\$ 1,029.60	\$ 1,029.60	\$ 1,301.55	\$ 1,301.55
<b>Total Cost</b>	<b>\$ 925.24</b>	<b>\$ 925.24</b>	<b>\$ 959.38</b>	<b>\$ 959.38</b>	<b>\$ 1,029.60</b>	<b>\$ 1,029.60</b>	<b>\$ 1,301.55</b>	<b>\$ 1,301.55</b>

	Amazon Mom	Sam's Club	Stop & Shop	Babies "R" Us VIB
<b>Terms &amp; Conditions</b>	Amazon Mom: 5% automatic delivery plus an additional 15% discount exclusively for Amazon Mom members. Automatic Delivery Terms: Get a discount on our everyday price, Pay for each order only when the item is shipped, Easily change the flavor or size of an item, skip a delivery, or get an extra delivery when you need it, There are no commitments, obligations, or fees and you can cancel a subscription at any time.	\$40/yr basic membership	N/A	Card is free and reloadable. 10% added by company for every dollar added up to \$200/yr
<b>Other Features</b>	Free 2 day shipping on all eligible purchases not just diapers; Unlimited stream movies on Amazon Prime; 1 free Kindle rental per month	Club membership on other bulk items for the family	N/A	Friends & Family can contribute to your card too
<b>Shipping</b>	2 Day shipping included	Free Shipping	No shipping unless using Peapod home delivery. Peapod order minimum is \$60. Delivery charge extra.	Pick up in stores or free shipping for orders \$79+

## RESULTS



Amazon Mom pricings came in the cheapest followed by Sam's Club. The difference between the two stores is only \$86.02. Such a small difference could disappear if you vary the assumptions or change the time period the child is in a particular size of diaper. There is a \$335.55 difference between Stop & Shop, the local grocery store, and Amazon Mom. That difference is less likely to change with changes in the assumptions. If you're trying to make a decision between the local grocery store and a subscription service like those evaluated in this study, the data suggest that the subscription service would win every time. Babies "R" Us can in as the most expensive. Although, Babies "R" Us diapers are cheaper than the grocery store for sizes 1-3, size 4 diapers were \$.07 more per diaper than the grocery store. This is compounded by the fact that size 4 in this study was used for the longest period of time.

## STUDY LIMITATIONS

### BRAND & PRODUCT

In order to get an accurate comparison across stores I had to use two different products, the Pampers Swaddlers and the Pampers Baby Dry. At the time of the study Sam's Club did not carry Pampers Baby Dry for sizes 1 & 2.

### SIZING DIAPERS WITH CHILD'S AGE

Every child is so different it is hard to come up with the right length of time a child will be in a particular size diaper. In order to assist with that problem, I used the CDC growth charts for girls and used the 50 percentile line. Therefore, baby boys or your child may be in different sizes than this analysis outlines. See conclusions for helpful general observations.

### COUPONS

This study does not take into consideration the availability of manufacturer's and retail coupons since they are hard to count on consistently. More savings may be possible by using coupons. Furthermore, retailers like Sam's Club and Amazon don't typically accept manufacturer's coupons.

## OTHER COSTS

There are other costs to changing diapers that are not included in this study. Things like diaper bags, rash creams, diaper disposals, special trash cans and liners are not included in this study.

## QUANTITY PER BOX AND PARTIAL BOXES

One of the limitations to buying in bulk is what happens with leftovers. Since diapers are nonperishable, we chose to not address this. In this situation it might be more profitable to buy during those in-between growth spurts from a store that accepts returns. Others will simply choose to sell extra diapers online or save them for the next child.

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# DISCUSSION

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## WHAT ABOUT OTHER DOT COMS?

There are other websites that offer competitive programs & prices on diapers. Diapers.com offered all sizes in this analysis for \$49.99 December 2012. However the number of diapers in the case varied and didn't end up being cheaper.

## WHAT ABOUT STORE BRANDS?

In order to do a cost comparison I needed the same item but of course there are store brand diapers. The problem is that they don't work for some people because of the quality—just read the online reviews. Wal-Mart's Parent's Choice brand cost \$.15 each for size 1 & 2, \$.14 each for size 3 and \$.16 each for size 4 diapers. However, you have to shop in stores or spend \$45 online to get free shipping. It may not be a bad option since it is cheaper than even Amazon Mom's prices.

## SHIPPING VS. IN STORE PICKUP

At first glance it seemed like maybe this variable would be a deciding factor between say Babies "R"Us and Amazon. However, surprisingly, every retailer but the grocery store offered free shipping or free shipping on orders over the price of a big box of diapers anyway.

## MEMBERSHIPS & SUBSCRIPTIONS: ARE THEY WORTH IT?

It was unclear if the subscription and membership fees would outweigh the savings at first glance. We're talking pennies per diaper difference. Could they really add up? Well, at the current rate of the Amazon Mom membership of \$79.99 per year, yes, it appears worth it. That is if you're going to buy the Pampers outlined in this study.

## CONCLUSIONS

**The longer you can keep your child in the smaller diaper size, the cheaper it is.** In reading many mom forums and blogs it seems that there was not a real consensus on sizing diapers with children's age. Some moms liked tighter fitting diapers. Some moms even said their child never wore size 4 diapers.

**The Sam's Club membership or Amazon Prime membership is worth it just for the diaper savings.** This is assuming the costs of the memberships and the price of diapers go up proportionately with inflation, barring any other new companies and/or promotions entering into the competition.

**Current Netflix customers can save more.** If you are already paying for Netflix and would cancel your Netflix subscription in exchange for watching streaming TV/movies on Amazon Prime, then your savings would be an additional \$287.64 over three years.

	Amazon Mom	Sam's Club	Stop & Shop	Babies "R" Us VIB
Total Cost of Pamper's Diapers from Birth to Age 3	\$ 1,692.45	\$ 1,778.47	\$ 2,028.00	\$ 2,122.37
Wipes \$20/Mth X 3Years	\$ 720.00			
<b>Grand Total</b>	<b>\$ 2,412.45</b>	<b>\$ 2,498.47</b>	<b>\$ 2,748.00</b>	<b>\$ 2,842.37</b>
Netflix Subscription @ \$7.99/Mth	\$ (287.64)			
<b>Grand Total</b>	<b>\$ 2,124.81</b>			

# APPENDIX

FIGURE 1.

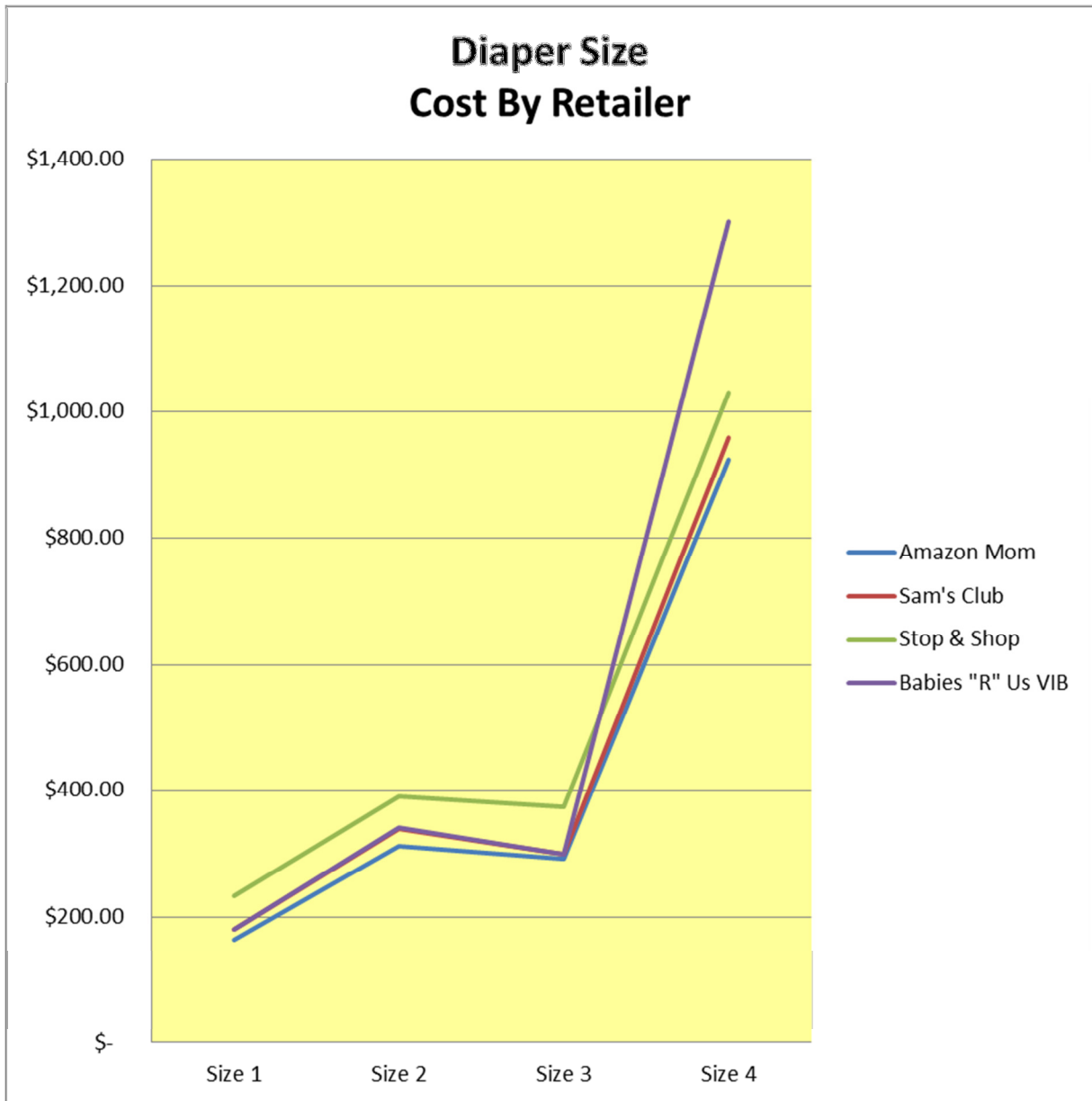




FIGURE 2.

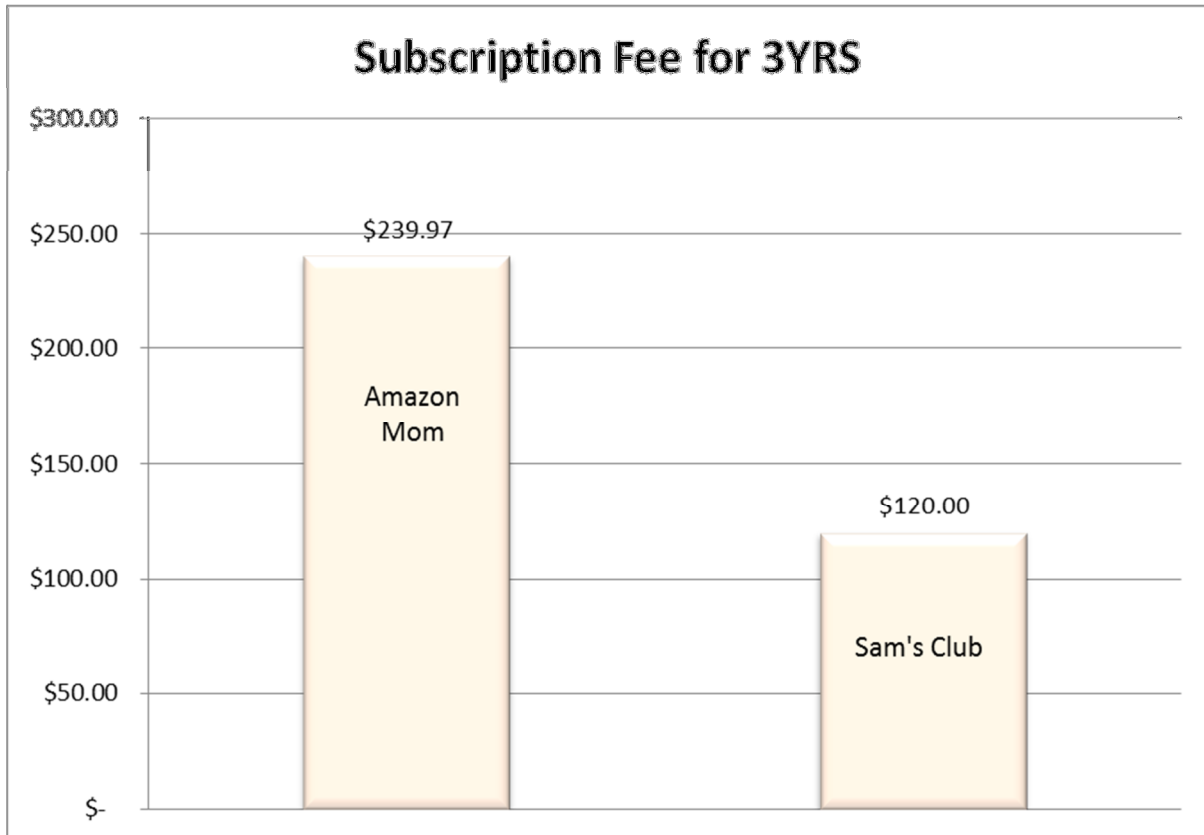


FIGURE 3.

