

the projected population of mexico and its financial consequences

By Richard Stephen Svorec

INTRODUCTION

One of the most important elements of finance seems to me to be the population. There does seem to be an optimum population in order to have a country with a strong financial position. Too few or too many people give a weak financial picture.

It therefore occurred to me to try to estimate the future population of Mexico and its financial consequences.

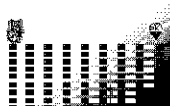
I had heard people talking about the very high birth rate of Mexico but I know of no such studies. The Mexican Government doesn't

seem to be doing anything about the population problem and I wondered why. Are they ignoring it for political reasons, for moral reasons, or is it just that the problem is not as serious as it seems?

Also I wondered as to what the financial position of Mexico would be in the future taking into account the future population of Mexico into the calculation.

U. S. A.

I thought a good place to start would be to look at the population history of the United



States since statistics in the United States are both the most complete and the most accurate.

In judging population growth it seems to me that the most important variable is the fertility function or the number of children per woman. In graph I we have this function. Children for each woman. For example, one woman may never marry and therefore hopefully have no children. Another woman may marry and have ten children. In this case the average number of children per woman is five.

In graph I we can see that this function is logarithmic and decreasing. The rate of decrease was very constant except when disturbed by the great depression and world war II but now it appears to have returned to its normal decreasing tendency.

Another important fact is that children per woman is below the line of replacement for the first time in the history of the U.S.A. This means that the population has stabilized.

Although statistical figures for the U.S.A. still show an increasing population, I believe it to be due to immigrants entering the country and not due to the internal birth rate.

This is very important in that since the U.S. Government can control the immigration rate it therefore can control the population size in the U.S. so as to hopefully maintain an optimum size.

CAN MEXICO STABILIZE HER POPULATION?

In graph II we have computed the same children per woman function for Mexico that we saw in graph I for the U.S.A.

I could not find a children per woman data for Mexico so I computed it as follows:

1. I used the birth rates per 1000 habitants for Mexico from the Monthly Bulletin of Statistics of the United Nations.

2. I noticed that the United States figures for the birth rate per 1000 habitants (Same Source) had a certain relatively constant relationship to children per woman.
3. I assumed this same relation held for Mexico and converted the birth rates per 1000 habitants for Mexico into children per woman.

You can see that in graph II we also have a declining tendency in children per woman, this means that Mexico's population will stabilize. But the question is when.

In graph III we have the answer. The tendency line has been extended and will cross the replacement line in year 2240, or in 268 years.

It should be noticed that the tendency line for Mexico does not decrease as fast as the tendency line for the U.S.A. This is probably due to social reasons.

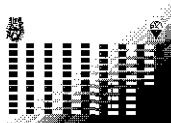
Graph III also has limitations in that the tendency line was computed from very limited data of only about 7 1/4 years but extended to 268 years. But I could not find more historical data for Mexico. The second assumption is that the replacement line is the same for Mexico as the U.S. Obviously this is not so, especially when projecting 268 years into the future. But I think that it is a reasonable estimate.

WHAT WILL BE THE FUTURE POPULATION OF MEXICO?

Now I will try to estimate the future population of Mexico.

First we need a trend line for the population in Mexico. We have this graph IV. Once again population increases at a geometrical rate and this is why once again we have a logarithmic scale.

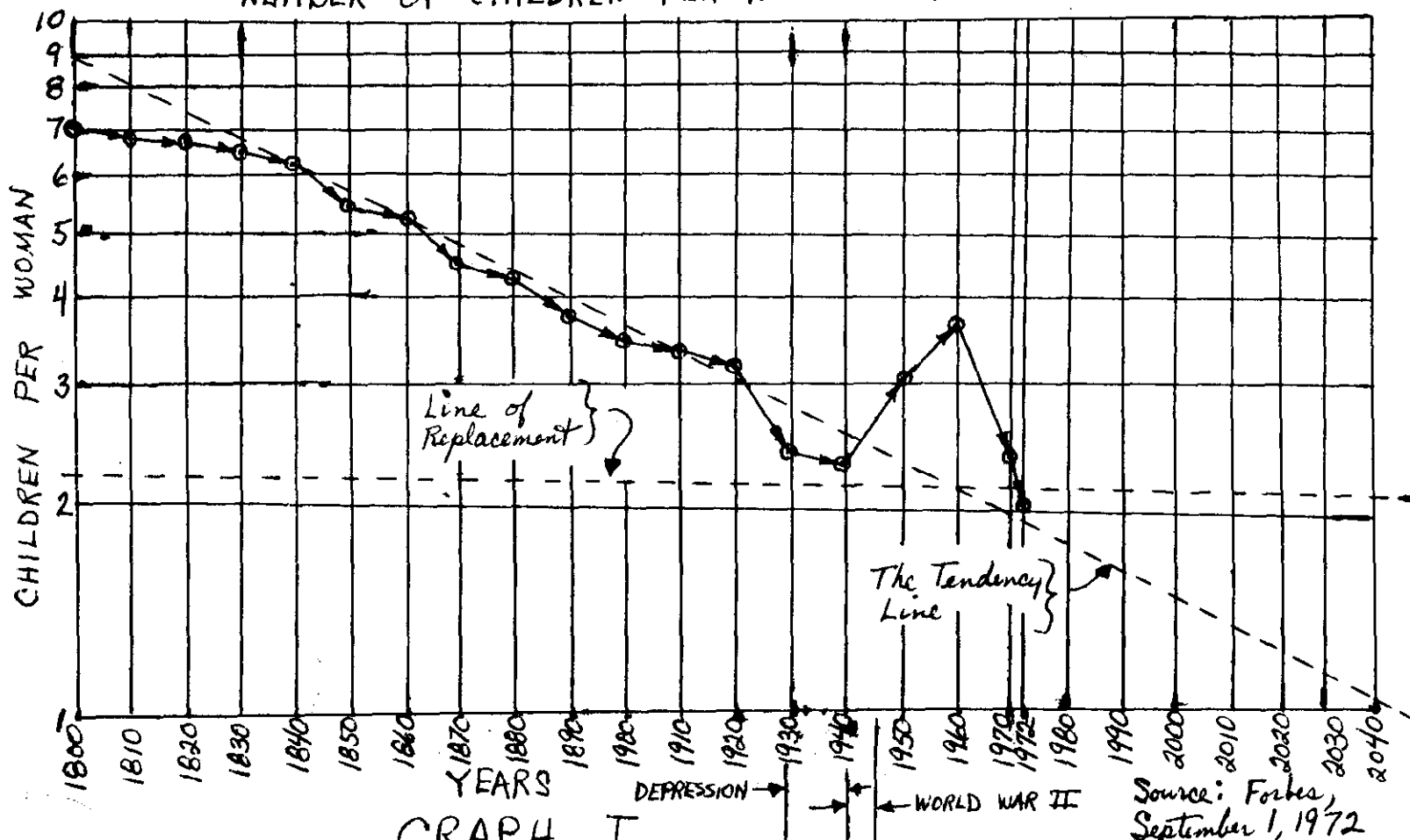
This trend line of graph IV was transferred to graph VI and extended, as the dotted line.





UNITED STATES

NUMBER OF CHILDREN PER WOMAN IN THE U.S.

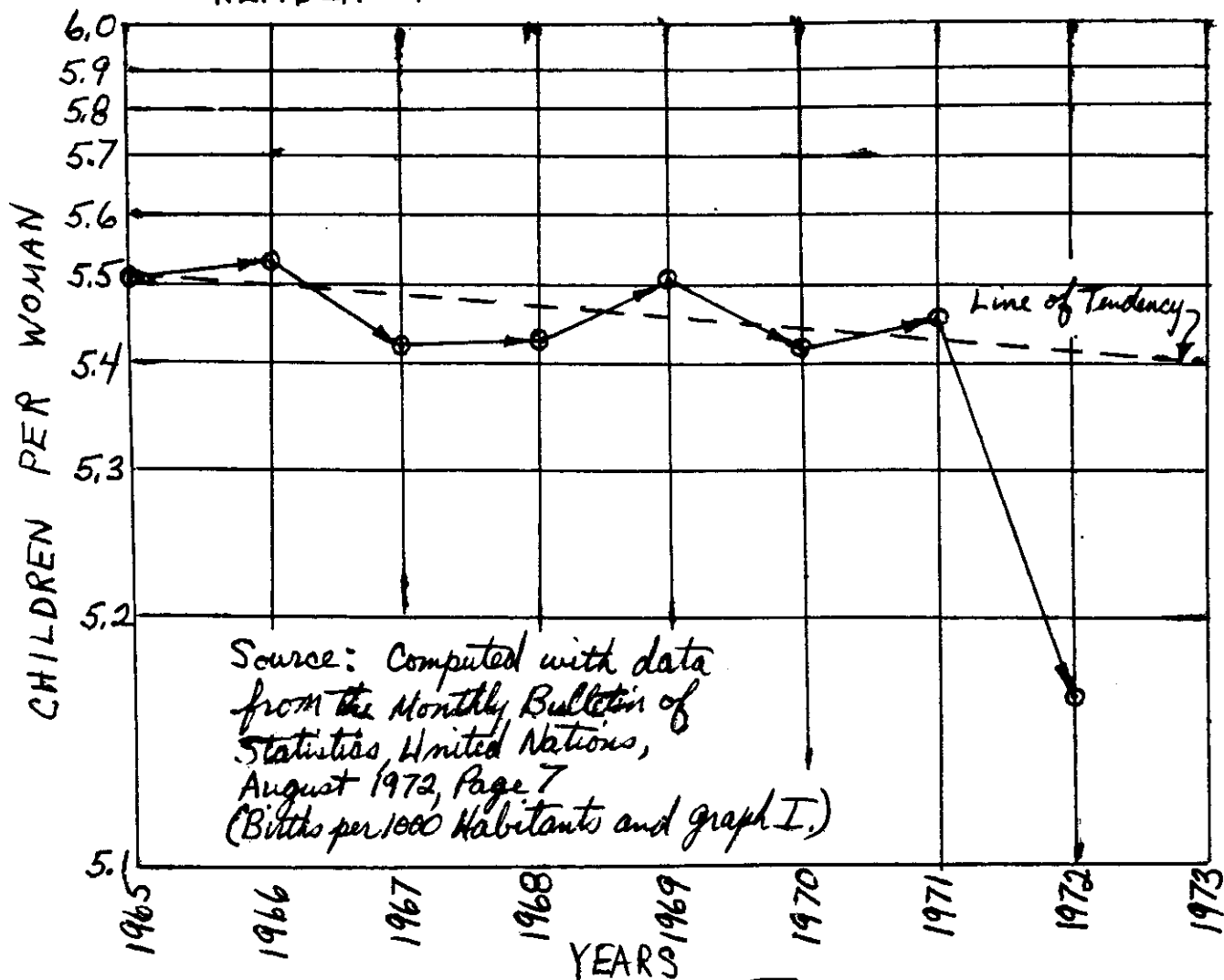


GRAPH I

Source: Forbes,
September 1, 1972
Page 37.

MEXICO

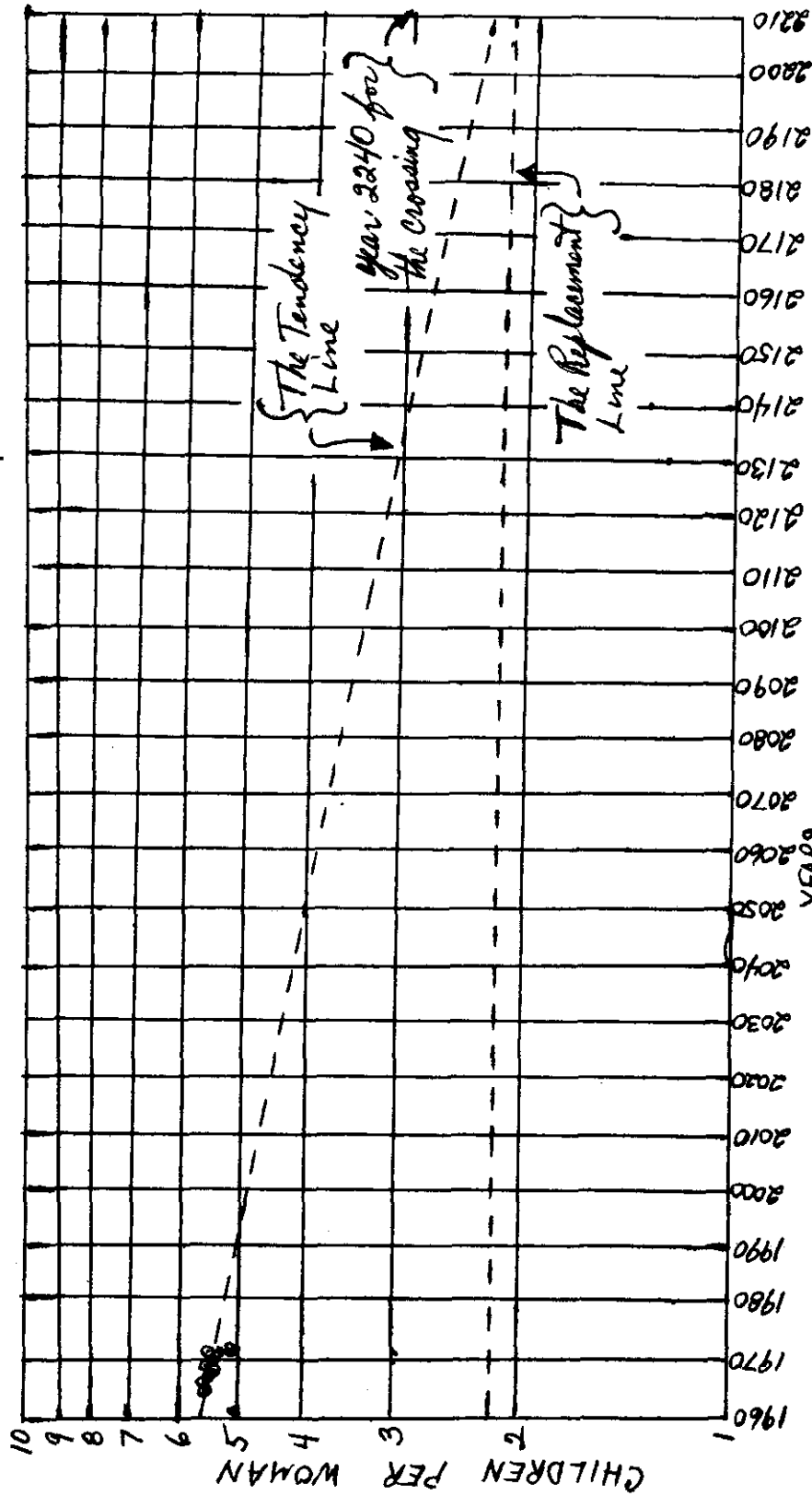
NUMBER OF CHILDREN PER WOMAN IN MEXICO



GRAPH II

MEXICO

NUMBER OF CHILDREN PER WOMAN IN MEXICO PROJECTED



Source: Graph I

GRAPH III

Now utilizing graph V we will estimate the future population. Graph V tells us how fast the population is increasing in graph VI. If 5.5 children are born for each woman then we have the slope of tendency of population increase shown by the dotted line in graph VI. If only 2.2 children are born to each woman then we have zero slope or no population increase at all. The purpose of graph V is to show this relationship of number of children per woman and the increase in population for all values between 5.5 and 2.2 children per woman.

Let us now construct graph VI. From graph III we can tell the number of children per woman for each future year. We can then go to graph V and tell the increase to the population and chart this increase with its appropriate slope or increase in graph VI.

I hope you can get a general idea of how I have done this and that you are not thoroughly confused.

CONCLUSION

We can see from graph VI that the population of Mexico will (may) increase to 1,000,000,000 persons in year 2240 and thereafter begin to decrease.

WHAT DOES THIS MEAN FINANCIALLY?

Let's compare the U.S. and Mexico once again. The U.S. has leveled off its population with a little over 200,000,000 persons. Mexico will level off with 1,000,000,000 persons or only FIVE TIMES MORE.

It could well be that Mexico will have even less of a population because as the Mexican women learn to enjoy the good things in life such as a high standard of living this means less children.

For example, I talked to one of the waitresses in Sanborn's and she said that she will use birth control, even though a Catholic, and have only 2 or maybe 3 children. Her mother had many children, say 10. This waitress from the country is already at the replacement rate of 2.2 children or we can say she has the social standards of a Mexican 268 years in the future.

CAN MEXICO SUPPORT A POPULATION 5 TIMES THE UNITED STATES?

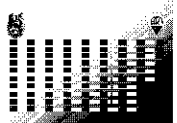
Mexico is not as large as the U.S. only about 1/2 to 1/3 as large but this is not the point. The U.S. is and will be experiencing a greater and greater population decrease. Therefore the immigration must be increased to maintain the population for a strong economy and for strong national defense. Therefore Mexicans should be able to enter the U.S. An excellent solution for both countries and a tendency to have equal population in both countries.

It should be stated that these are many countries with a population decrease and easy entry for foreigners. For example:

Country	Births/Thousand
West Berlin	9.7
Fed. Rep. of Germany	12.8
Luxemburg	13
Finland	13.1
Sweden	14.1
Austria	14.5
Hungary	14.5
Switzerland	15.1
U. S. A.	15.9

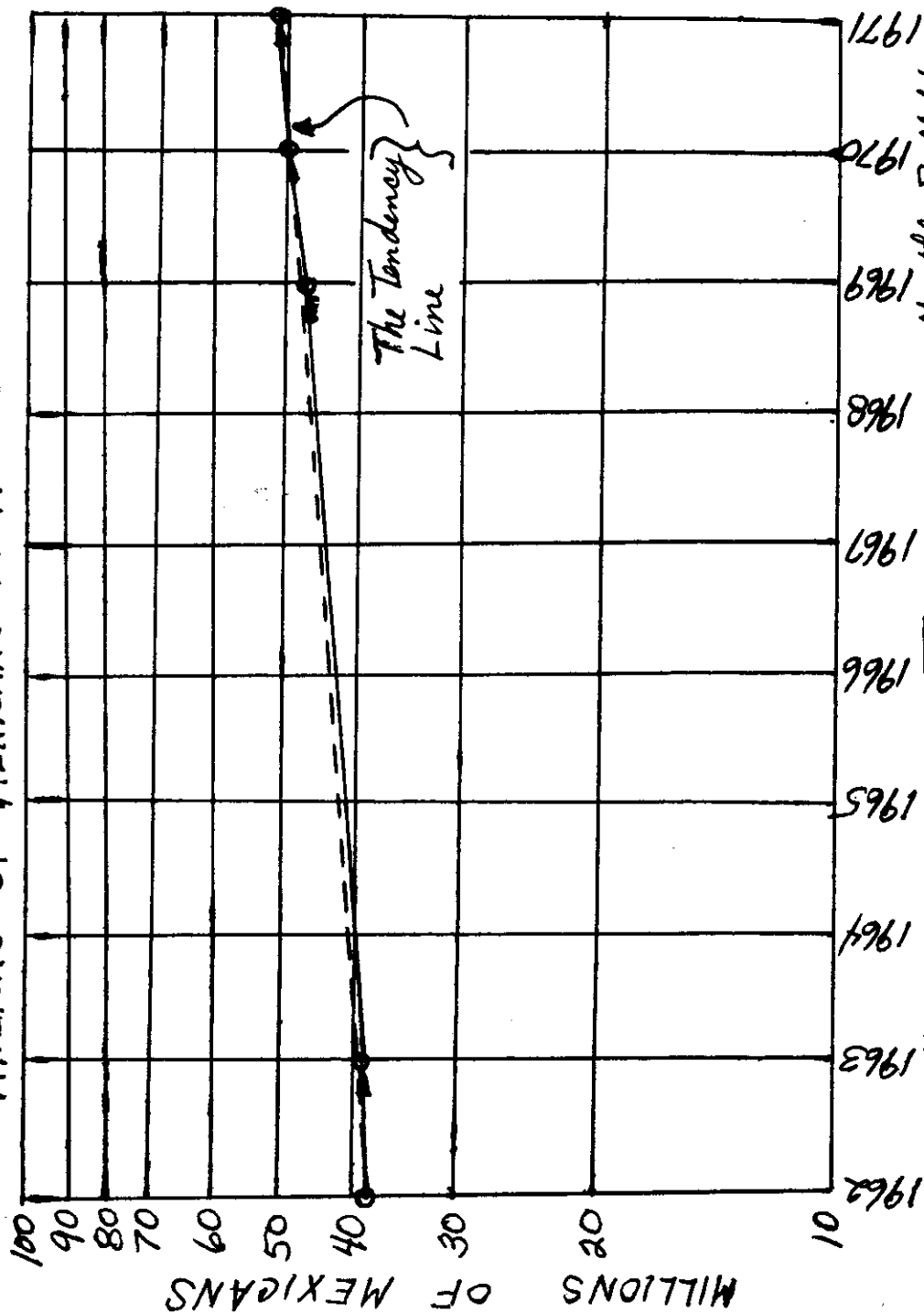
I did not see statistics on countries with very little population like Russia.

We can see that as a country develops its



MEXICO

MILLIONS OF MEXICANS IN MEXICO

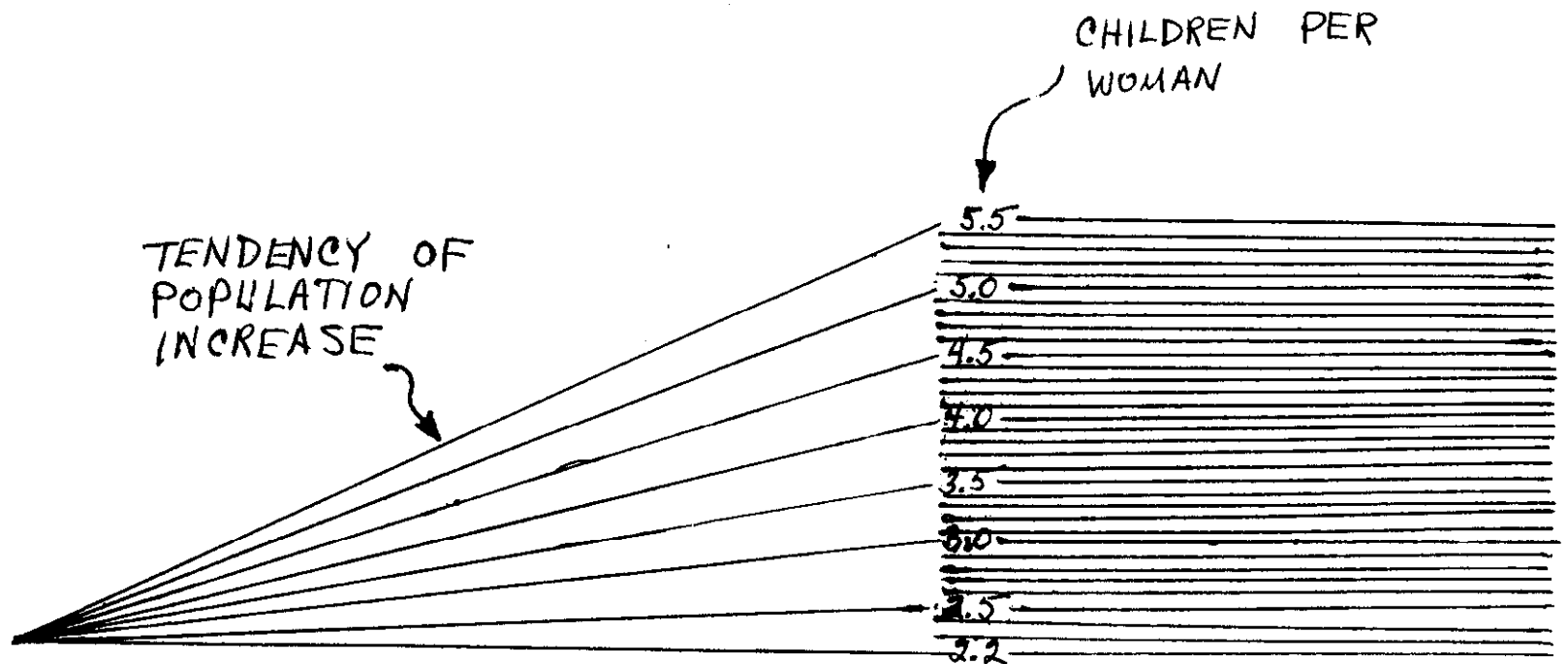


Source: Monthly Bulletin
of Statistics, United Nations
August 1972.

YEARS GRAPH IV

MEXICO

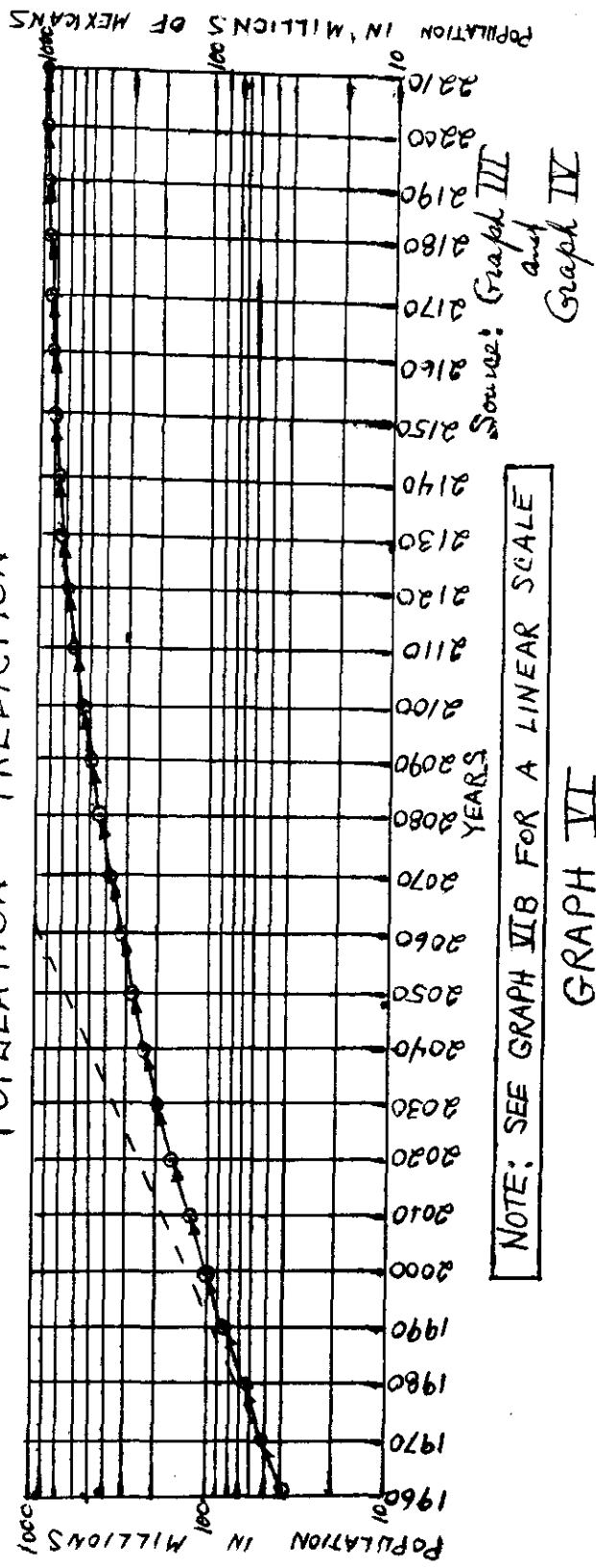
THE RELATIONSHIP BETWEEN CHILDREN PER WOMAN
AND THE TENDENCY OF POPULATION INCREASE IN MEXICO



GRAPH V

Source: Graph II
and
Graph IV

MEXICO POPULATION PREDICTION

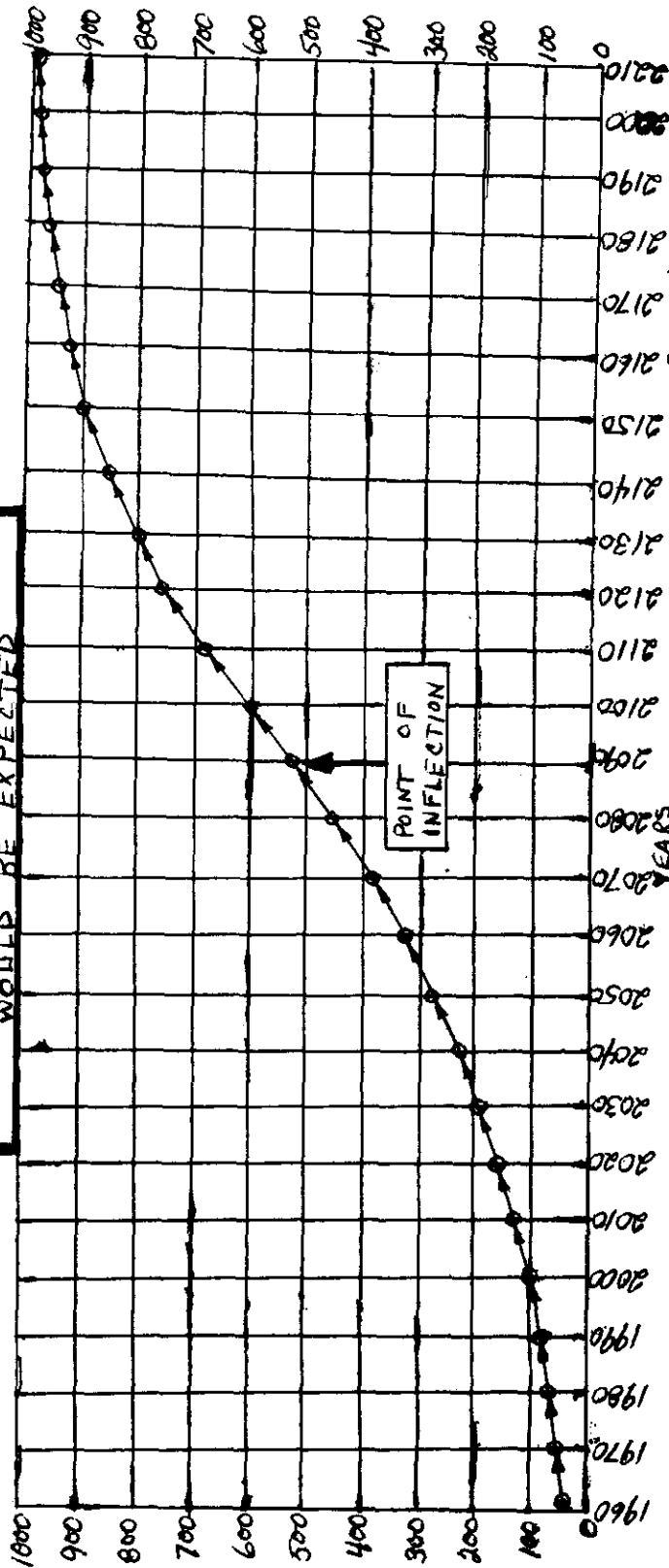


GRAPH VI

MEXICO

POPULATION PREDICTION (IN MILLIONS)

NOTE: THIS GRAPH IS JUST GRAPH VI
DRAWN ON A LINEAR SCALE
FOR EASIER READING
NOTE: THIS CURVE HAS THE FORM OF
THE NORMAL GROWTH CURVE THAT
WOULD BE EXPECTED



GRAPH VI B

Source: Graph VI.

population tends to stabilize and then decrease and it must depend on immigration to maintain its population.

Ancient Greece had a very high population growth rate and it solved its problems by population the whole Mediterranean area, North Africa, etc.

In my opinion it does not seem that we have a population problem in the world only a population distribution problem.

HOW WILL A DECREASED POPULATION INCREASE FINANCIALLY AFFECT MEXICO?

First of course companies that are associated with population growth will decrease. Such as baby foods, like Gerber Products and Johnson and Johnson makers of baby powder. It is interesting that these companies in the U.S.A. are trying to change their markets.

Gerber is saying that its baby food is good for old people and Johnson and Johnson is saying that its baby powder is good for all persons no matter what their age.

GENERAL INDUSTRY SUMMARY

As a general summary we can probably say the following about the long range future of these following industries in Mexico.

PROBABLY HELPED

Industries benefiting from disposable income. For example: travel; autos; jewelery, watches; photography; restaurants; vacation homes.

Service industries. Those replacing things the housewife used to do herself, especially, For example: convenience foods, childcare, specialized housework chores. (Maids will be too expensive).

Advertising. Big shifts in packaging and marketing. Less sharp distinction between woman's products and men's appeal as men do more housework and as women work more outside the home.

Sports. Manufacturers of athletic equipment and boatbuilders should prosper. Professional sports should continue to boom.

Health care. Anything to do with relieving the aches and pains and infirmities of middle and old age, as the average age of the population inexorably rises.

PROBABLY HURT

Commodity industries. For example, steel, aluminum, stone, lumber, glass, many types of food and clothing, tobacco, liquor.

Children and youth-oriented operations. Toys, record and summer camps.

Broadcasting. More demand for maturity in programming, less for children's and for all-ages-type programming. Fragmentation, as via cable or pay T.V.

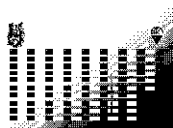
Movie Theaters. It's the youth who will go for them while the middle-aged stay home and watch their favorites on T.V.

Life insurance. Less concern and less need for it because more wives will be working and there will be fewer children to raise.

CONCLUSION

I hope that I have shown that things are not as bad as they seem.

And I think that if everyone in the world works together we can all solve our problems together.



REFERENCES

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1972

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of Statistics,
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