

An increasing number of articles and information is appearing on the approaching demographic crisis. This will impact the bus industry in several different ways including reduced population, fewer workers and possible economic problems. Shown here is a Setra S 417 coach in a scenic area near Las Vegas. SETRA.

Back in the June, 2019 issue of NATIONAL BUS TRADER we ran an article mentioning the forthcoming demographic crisis and how it would impact the bus industry. Since then several things have happened. The pandemic has hastened the problem with early retirements and people leaving the work force, we are seeing an increasing concern from the demographers in the media and the Women in Buses organization has been active in looking for bus drivers. This, combined with inquiries and additional information, has prompted a revised and expanded article on this topic.

I might start off by mentioning that none of this is rocket science nor hidden information. All of the items I mention are public information and available on the Internet if you want to do your own research. That may not be necessary since the demographers are getting concerned and there are an increasing number of articles on this topic online, in newspapers and in magazines. In fact, there was an appropriate article in the *New York Times* not long ago. However, there may be people who wish to avoid mentioning this information for their own reasons.

In this edition, I will lightly go through the basic information as well as a few side issues. Where possible, I will gear the information towards the bus industry. This will give readers an opportunity to see what is coming down the road so that you can make decisions today. While the situation may vary somewhat from country to country, it is very obvious in some places. It can be said that the United States and Canada are already feeling the initial impact.

Basics and Resulting Concerns

A recent Rasmussen survey indicated that only 29 percent of respondents considered global warming or climate change to be the biggest issue facing humanity. The demographers will tell you that our biggest concern should be the forthcoming demographic crisis. For quite some time now birth rates have been seriously declining in developed countries. Europe and Asia appear to have the worst problems. Much of Western Europe has low numbers and Italy is moving towards a point where most of its population will no longer be of Italian descent. Asia also has problems,

probably enhanced by the fact that it has low immigration. Humanity is becoming an endangered species. There are already places where the population drops in half with each generation.

There are a few places where the birth rate is still increasing. These are mainly undeveloped and third-world countries including several in Africa. However, even these birth rates are declining. A few years ago the demographers predicted that by 2050 the entire globe will fall into an irreversible decline in birth rate. This most likely is no longer true since the pandemic has brought this date closer, but I have yet to hear a new date.

I am not going to go into much detail on why this is happening because that is a huge topic. Suffice to say that people have moved away from marriage, traditional families and children. The bottom line is that when people have fewer babies then there are fewer babies, fewer workers and fewer people to support the retired and elderly. Some of the demographers say that they can trace this trend back to the Great Depression. Prior to then, many couples had larger families that could provide for them in their old age. Some people began to depend on the new Social Security for their retirement. They expected others to have the children to pay into Social Security and that did not happen.

These changes bring about three concerns. All of them will impact the bus industry.

- 1. Reduced Population The most obvious of these is that population has started declining around the globe. Some places will be affected sooner or to a greater degree than others. What this means to the bus industry is that sooner or later we will see a decrease in total passengers. However, a decrease in specific types of passengers may be more immediate.
- 2. Demographic Imbalance This is of particular concern to the demographers since

it means we will have fewer young people and workers but more older people and retirees. In the past our demographics could be diagrammed like a pyramid with lots of babies at the bottom, workers in the center and a small amount of seniors and retired at the top. With the reduction in birth rates but increasing medical technology and longevity, our demographics are now shaped more like a diamond on playing cards. This has few babies at the bottom but an increasing number of seniors and retired folks.

This is starting to create some undesired situations. Because there are fewer babies, the result is fewer workers. An immediate concern is the lack of workers paying in to Social Security to support those retired. There are also concerns that we may not have enough doctors, nurses and tour bus drivers to support the elderly in the years ahead.

3. Recession – There is increasing concern that the demographic imbalance will lead to a global recession. Fewer workers will lead to less production while more of our resources will have to be used to take care of the elderly. On a short-term basis we may see some industry and manufacturing move to other countries with more workers (I will mention this later). Eventually this could be a problem.

Individual Countries

What would be appropriate would be to review some countries to look at their problems and programs. In dealing with fertility rates you might note that a rate of 2.1-2.1 children per female - is considered replacement level. Higher rates indicate an increasing population while lower rates indicate that the population is decreasing from generation to generation.

A good place to start is with China. Fearing overpopulation, China's leader Deng Xiaoping imposed the infamous One-Child law in 1979. In many cases it was enforced with forced abortions and forced sterilizations. Thirty-two years later, China's labor force started falling by millions each year. For example, in 2018 China's labor force fell by 4.3 million. Eliminating children only eliminated the young who grew up to be workers and were positive for the economy.

Worse yet, the One-Child law prompted many couples to abort baby girls, but keep a boy to better guarantee the financial support of a child in their old age. As a result China today has 34 million more men than women, and hence fewer opportunities for marriage and family, giving them another demographic imbalance and problem. In 2016, China went to a two-child policy and in 2021 to a three-child policy. This may be a case of too little too late since some researchers are calling China's population decline "unstoppable." Since the global economy has relied on China and its inex-

Changing demographics will impact the bus industry in different ways. Some of these changes are already obvious and can be seen in fewer workers and a declining number of students. Knowing what is coming should help in making decisions. MCI.



China is facing problems because their One-Child policy of 1979 caused their labor force to decrease substantially in later years. They went to a Two-Child policy in 2016 and then a Three-Child policy in 2021 because of their declining work force. Shown here is a hall for completed buses at the Yutong factory in China. NBT.



pensive work force for growth, any reduction in workers may have a negative impact on other economies around the world.

Researchers have said that Japan is aging faster than any country in history. Since 2011, more adult diapers have been sold in Japan than baby diapers. By the year 2040, there will be one Japanese citizen above the age of 100 for every baby born. There is a prediction that in 2050, only 28 percent of Japan's population will be of working age, a situation that may be impossible to deal with. Considering that some people of working age will take care of elderly relatives or their own families, having fewer than one in four citizens able to work will seriously restrict business and industry. Japan's industry is trying to move to robots in order to reduce the need for workers.

Singapore can boast of modern buildings, impressive health care and low crime rates. However, they are in trouble with a fertility rate of only 1.1, which means that the population declines by half with each generation. In spite of some immigration, the average age is now about 40. Officials have programs in place to support families and increase the birth rate. Hong Kong has a fertility rate of 1.09, even less than Singapore. The Hong Kong government has been encouraging larger families to deal with their aging population. In Taiwan, the fertility rate is down to 0.9 while South Korea has dropped to 0.92 – both indicating that the population declines by more than half with each generation. South Korea is now spending huge amounts of money supporting families and children.



Heading towards the beach, this MAN articulated bus stops in front of the local McDonalds in San Sebastian, Spain. Much of Western Europe is suffering from reduced birth rates. Spain, with a fertility rate of 1.48, is losing a quarter of their population with every generation. NBT.

While the worst problems may be in Asia because of its limited immigration, there are numerous other countries where the fertility rates are starting to cause a population imbalance or economic problems. Europe is a good example. Immigration has helped increase the number of workers in Europe, but immigration has in turn created its own problems since many of the immigrants have not assimilated well into the European culture.

Russia is an interesting situation because years of Communist control and abortion encouraged smaller families. Russia now has a fertility rate of about 1.2. Immigration has not worked well here because many of the immigrants have not assimilated into the Russian culture. Hence, the government has offered a huge baby bonus. Spain is facing a declining population with a fertility rate of 1.48. The government has a pro-natal policy promoting births. Germany has a similar fertility rate of 1.4 but survives better because its strong economy attracts immigrants. Even with that, Germany has had to close many schools and its population is starting to age, which will impact its economy.

Demographers have issued warnings about Italy. The fertility rate in Italy is now down to about 1.4 as younger people put off marriage. Venice is in trouble because it has more tourists than residents. When its population declined below 60,000, Venice held a mock funeral for itself. The number of indigenous Italians is declining at an alarming rate. A Eurostat forecast predicts that in a few decades, indigenous Italians will become a minority in Italy as people of African or Asian descent will make up more than 50 percent of Italy's population.

Is any area of Europe doing well? Ireland has had the fastest-growing economy in the European Union. A major factor is that Ireland has the youngest population in the European Union and hence has young workers available. Much of this is because Ireland's Catholic background has kept abortion illegal until recently.

Your editor takes time to examine the engine compartment of a newly-built coach in China. Those who are watching the numbers are suggesting that as the size of work forces decline, production may shift to other countries with more younger people. A young work force will become a natural resource. NBT.



An interesting side note has come out of the efforts in countries working to support the birth rate and families. Researchers have pointed out that marriage is good for society. In addition to the fact that marriage reduces the number of households and resulting pollution, it has numerous other social advantages. Married people are statistically less likely to commit crimes or be the victim of crimes. They are less likely to be homeless or require welfare. Their children tend to do better in school and in life. Married people are also statistically more healthy in situations other than major diseases such as cancer.

This brings up the important fact that young people and workers are increasingly becoming an important natural resource. The researchers are saying that as China's work force diminishes, they expect to see some of the manufacturing and industry move to India where there is a younger labor force. The undeveloped and third world countries with the highest birth rates may be able to take advantage of their young work force with training while attracting manufacturing and industry. The Philippines may be an interesting situation because their second language is American English.

Why are some countries making an effort to increase their birth rate while others seem to be ignoring this demographic trend? The answer may well be politics. In some countries the people who make money eliminating babies are also heavy contributors to election campaigns. Elected officials often have a tendency to protect their supporters. This may also explain why some countries are talking about global warming or climate



Italy seems to be among the European countries most affected. Venice has already held a mock funeral for itself and the demographers are saying that indigenous Italians will be a minority in Italy in a few decades. This Rome tram was photographed at the stop adjacent to the main railroad station. NBT.

change while others are trying to deal with the demographic crisis.

United States

The United States has survived better than many other countries because of immigration. However, by the second generation the immigrants no longer have a higher fertility rate. There are already several indications of increasing demographic problems. For example, we are seeing an increased number of medical professionals from other

countries including doctors from India and Europe as well as nurses from the Philippines. This does not bode well for the future when an increasing percentage of older people will require more medical professionals that may or may not be available.

Those watching the numbers are pointing out that the recent pandemic has accelerated the demographic changes. Faced with the pandemic situation, many people have retired early and others have left the work force. This has reduced the number of people working and paying into Social Security while increasing the number who are retired. Numerous employers are finding it difficult to locate and hire staff, which is only hurting the economy.

Prior to the pandemic, demographers were warning that in 2030 approximately 20 percent of the United States population will be retired. This will be the first time since the founding of our country that we will have more retired people than children. However, as a result of people leaving the work force or retiring early because of the pandemic, this milestone will now come earlier. Since young workers are the key to a vibrant economy, this again does not bode well for the future.

I commend the Women in Buses group for their efforts in looking for ways to deal with the bus driver shortage. However, this problem is far from being a local situation. Much the same thing is happening in other countries. Europe has been dealing with a similar bus driver shortage situation for years. In addition, the problem is not limited to bus drivers since many places are having

The driver shortage is not new. Europe has been fighting a driver shortage for many years that extends to adjacent countries. As our population declines, the driver shortage is expected to get worse. This driver has command of a new MAN coach in Europe. MAN.



difficulty finding and hiring applicants for numerous other positions. As our population declines, there will be fewer and fewer workers available.

What are the options? The simplest and most obvious alternative is to have more babies. That cute little baby of today could grow into a fine bus driver in 25 years. Some places have had success with inviting applicants from other countries. I have been involved with some of this in the past and have been able to apply for visas for applicants in other countries. One suggestion might be to look at the Philippines since American English is their second language.

Rome

A good question people have asked is whether something like this has happened in the past. The answer is that both the ancient Greek and Roman Empires had similar problems. Of the two, the Roman situation is easier to follow.

Caesar Augustus came to power in Rome about 27 years prior to the birth of Christ. He stated that a strong state required strong families so he set about supporting marriage and larger families. He offered tax breaks for large families and cracked down on abortion. Parents of three or more children were given rewards, property and job promotions while widows and widowers were encouraged to remarry.

Augustus imposed strict marriage laws and changed adultery from an act of indecency to an act of sedition. He promoted childbearing over abortion and issued an edict to discourage abortifacients. Abortion itself became a crime in the Roman Empire in the third century. In spite of this, families fell apart and the effectiveness of the empire and its armies went into decline. Immigration came from those fleeing the Goths and eventually the empire simply became ineffective and fell apart. One advantage that the surviving people had is that they knew how to make babies.

I have yet to hear how this will play out in our modern world. It has been suggested that countries with younger people will be in a position to increase their industry and manufacturing capabilities, thus replacing those countries with aging populations. It is worth mentioning that some people point to the Sermon on the Mount in the Bible where Christ said that the meek will inherit the earth. This makes no sense to those of us who equate the word "meek" to someone who is shy and retiring. The problem here is in the translation. In the original Greek version of the Bible, the word is "praus" which does not mean weakness but rather strength brought under control. In this context, it suggests the command to multiply and bring children into the world. It does not take too much to understand



This photo shows what the inside of the Colosseum in Rome looks like today. The Roman Empire had a similar demographic shift nearly 2,000 years ago that moved away from families and children. In spite of programs put in place by Rome's leaders, the decline continued until the empire fell apart. NBT.

that those who have the most children will inherit the earth.

What to Expect

What will happen as populations decline and age is pretty logical. Things may vary from country to country and some developments may come sooner or later. As mentioned, some trends are already obvious in various countries and in the United States while others may be years in the future. Here is a list of what to expect either sooner or later. Expect the situation to get worse as time moves on.

Colleges and universities will experience two problems. One will be a reduction in students making it difficult to fill classrooms and meet expenses. The second will be a need to change programs and classes to better meet the needs of our changing demographics. Much of the knowledge and skills

Babies grow up into children who eventually get older to join the work force and contribute to Social Security to support the retired folks. Right now there are some serious concerns about a declining work force including a lack of bus drivers and less money going into Social Security. Some industries have had success with importing workers from other countries. MCI.



needed today will change in future decades as our population declines and ages.

Businesses will find it increasingly difficult to stay in business. They will find it more difficult to get help while the number of customers declines. We will most likely see consolidations or a reduced number of companies in some businesses.

As the number of children decline and the number of retired folks increase, expect to see fewer school buses but more motor-coach tours. There will be less need for teachers and more need for doctors and nurses. School buildings may be converted to senior centers, senior housing or even retirement centers.

As the population declines and older folks move into retirement homes, we will have a surplus of homes. Real estate prices will drop because there will be fewer and fewer buyers. In some cases it may be necessary to knock down excess buildings. That is already happening in parts of Europe.

Economics may shift somewhat based on available workers. China is already in trouble because of its former one-child policy. Those watching the situation expect to see some production shift from China to India where there is a younger work force. For the same reason, Ireland may become more important in business because they have a younger work force than other countries.

Younger people should worry about retirement money. Social Security was always somewhat of a Ponzi scheme. When created, it worked well because there were



One of ongoing concerns is that the demographic changes will require corresponding career adjustments to meet the needs of our modified population. Fewer school teachers will be needed while our aging population will require more doctors, nurses and medical support. This might be something to keep in mind for those going to school or picking a vocation.

several workers for every retiree. However, it becomes less viable when there are more retired people than workers. What are your alternatives for retirement?

What is interesting is that in the past it was typical for farmers to have larger families. In addition to having help on the farm as the kids grew up, those kids could take over the farm when dad retired. Hence, security in retirement came from having several children. Other people moved away from that and looked to Social Security for their

retirements. The same situation prevails; if you have no children then there is no one to pay into Social Security.

As this situation progresses, we may be able to provide updates and further installments from time to time. Following publication, we will make this article available for free download as a PDF. View busmag.com and click on "Archived Articles." Then select the article you wish to download.

This is the new Jouley electric school bus from Thomas. Some places are already finding it necessary to close schools as the student population declines. In some cases, the schools can be modified into senior centers, senior housing or even retirement centers. THOMAS/DAIMLER.





From the August, 2021
Issue of

National Bus Trader

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