

**Mr. Vince Barabba**  
**Testimony before the Joint Economic Committee**  
**July 21, 2009**

Thank you for inviting me to participate in this hearing. This is a topic for which I have had a long and deep interest. As an example, in 2002, I addressed my concerns at the 100th Anniversary of the Census Bureau in a presentation Appropriately titled for today's hearing: THE NEXT 100 YEARS...Starting Today.

During that presentation I pointed out few statistical agencies are either equipped or authorized to comprehensively assess what society needs to know because such an assessment would require a dialogue across the many functions and special interests that will use that information in their attempt to serve society. I pointed out that what was needed was an open discussion between those who determine what they need to know and those who collect it about the form, accuracy, and cost (in both time and money) of the information required. I stated that continued improvement in this area was need for at least two reasons:

First, it is no longer sufficient to address societal issues from the limited perspective of functional policy organizations such as labor, commerce, health, and education.

Second, government can no longer “predict and prepare” for the future. The fact that our society faces an increasing complexity and an accelerating rate of change now requires government to use information to “sense and respond” and at times “anticipate and lead.”

I have used two metaphors to portray fundamental changes that have occurred which have -- and continue to -- required us to design a new system of government statistics:

The first metaphor is the jigsaw puzzle. The mechanistic mind-set of the industrial age encouraged us to think about addressing problems in government and businesses as if we were solving a jigsaw puzzle. When one starts a jigsaw puzzle, one knows how many pieces one is supposed to have, and the chances are that they are all there. Each of the parts will interact with only a small portion of the other parts. If any of us had trouble trying to complete the puzzle, there is a picture on the box that reveals the single ultimate solution. This solve the puzzle metaphor fit reasonably well for most of the issues we faced during the early part of 20th Century – and represented, to a great extent, the way things were thought of at many public and private enterprises and taught at many colleges and universities.

The second is a molecular structure of interacting elements. In the latter part of the 20th century, business and societal challenges became far more complex. On a daily basis, we saw (and are seeing) the impact of this increasing complexity and accelerating rate of change on our daily lives.

We now operate in an environment consisting of constantly changing processes, relationships and components ... more like the elements in a molecular structure than a jigsaw puzzle. Depending on how the elements of a molecule interact, particularly when external positive and negative forces are imposed, we can end up with an entirely different outcome than we expected.

In the presentation at the Census Bureau I referenced an experience I had during my first tenure at the Census Bureau that relates to this issue and which is very relevant to the topic of this hearing.

During the annual budget development process a Commerce Department budget analyst had decided to reduce the Department's current budget problem by eliminating the Census of Agriculture item from the Census Bureau's budget. As might be expected, particularly since that Census is mandated by the Congress, the Department of Agriculture protested and appealed to the Congress to transfer the Census of Agriculture to their department.

While almost everyone in government was focusing on who should collect the information, Jim Bonnen, who would become one of my most constructive critics, pointed out that society needed to know and understand both the specifics and interactions of the agricultural system that started with the growing of agricultural products and ended with putting them on consumers' tables. This meant we needed to integrate the data and information collected from the inputs (that is, seed, fertilizer, machinery, etc.) through agricultural production, commodity assembly, initial processing, further manufacturing, wholesaling, retailing, transportation, and eventually to consumer consumption.

With that systems view in mind, he suggested the Census Bureau commit resources to identifying and integrating the different pieces of food sector statistics scattered throughout several economic censuses and surveys and relate them to the agricultural census. In essence, Jim suggested we align our statistical practices around the user's needs and not the existing functional organizational structure designed to collect information. Although we have made some improvements in this area, we still face similar issues because of the increased level of complexity and accelerating rate of change that has occurred since that time. As an example, who at that time would have expected an energy crisis and global warming that would encourage the use of corn based ethanol which eventually impacted the availability and eventually the price of corn?

To address many of the improvements that this committee is seeking will require an appreciation of thinking and acting in a more systemic way. Russell Ackoff defines a system as "any entity, conceptual or physical, which consists of interdependent parts." Conversely, "a system is a whole that cannot be divided into independent parts." Each element of the system must rely on and interact with the rest of the system if the enterprise as a whole hopes to succeed. Problems are best solved not by breaking them up into functional bits, but by carrying them into the next larger system and solving them

through integrative mechanisms. In short, we want to create a whole that is more valuable than the sum of its parts.

In my mind the proposed legislation is a potential first step to address the information needs of those who establish policy and laws. If implemented properly it could serve as a basis for the creation of a Federal Statistical System that that is of greater value to society than the sum of each of the individual statistical agencies which it encompasses.