Subject: Deepening the Warnings: Government data and business/economic journalism v. social science

Dear Dr. Fischhoff & Colleagues:

There are additional consumer warnings, reflecting social science standards for evidence that it might be useful for your National Academy Committee to include in its Report:

Admiral Blair, with a military background, may not be aware that, by standards of scientific evidence, important aspects of business/economic journalism probably are disconnected from reality. There is a degree of [unwarranted] daily confidence in explanations of the stock market and the economy, for example, that will mislead non-specialists.

Native Informants v. Scientific Analysis

For example, the leading brokerage houses hire people to watch stock tickers and news tickers and then - post hoc - to supply their brokers and clients (and journalists) with confident explanations about why the stock market did what it did. These made-up explanations, after the fact, are reported confidently to the public, even on the PBS Newshour (which should know better). They personify and portray Wall Street markets - summing millions of transactions, worldwide - as operating by a simple human-like psychology, with primitive emotional reactions to whatever seemed prominent to the analyst on his/her US (sic) news ticker. By contrast, one social science null hypothesis - Malkiel's classic A Random Walk Down Wall Street - has a counter-view that daily fluctuations are random. Another model could be based on deducing the hair-trigger models of hedge funds, moving trillions of dollars at lightning speed based on - not the news itself, but assumptions about how others will respond to the news. . . . Alternatively, someday, the major explanations cited by brokerage houses/PBS Newshour etc. could actually be tested as forecasts and/or validated and refined by reliable, evidence-based

methods.

Where Do Confident Economic Forecasts Come From?

Similarly, the DNI should know that the confident budget forecasts and estimates by CBO and other econometric models are based - still - on early regression equation methods that skim along the surface [i.e., estimated average coefficients] of underlying decision processes that, themselves, are not measured and evaluated directly. And the major macro-economic models - when used for projection - blow-up several years out. The major models are "manned," - i.e., adjusted, re-run, tweaked - to remain plausible. A usual practice - for example re health care cost savings and US deficits in the bill that just passed the Congress - is for the staff to do the long-term forecasts by splicing-in a coefficient [based on a historical average] for the out-years. Possibly, a few countries do better, but the DNI should know that the degree of *public confidence* about numbers is not reliable.

Thus - as in the case of US government Drug War statistics (discussed early) -   when it is important, the Admiral Blair should be wary of believing and using official US government forecasts, by other agencies, in his own forecasts. [Admiral Blair and the DNI system also could play a useful role as activist consumers, if they believe that it is in the national interest to have a rapid-learning R&D system for progress in databases and reliable models/analysis methods.]

A Political Warning: Unreliable and Delayed Public Data Now Award Competitive Advantages

I am enclosing an article by John Kay, "67 Ways to Guess Gross Domestic Product," in the same spirit of candor about Wall Street. Also, I bring it to your attention because he notes the much deeper problem - the unreliability of most of the major economic numbers published by the US government. It has been established, for years, that major sources of error in economic forecasting arise from the unreliability of the official US government statistics portraying current reality. Again, these unreliabilities are well-known to professionals and there is a standard process of revision cycles until "final" numbers are published, sometimes 18+ months later. And other countries might, or might not, do better. Admiral Blair, however, may believe economic data about current reality; when it is important, he should be wary about the predictable range of likely error.

Is this the best that the Obama Administration can do? No. A growing political problem is that the world's major financial players - hedge funds, for exam-

ple - no longer rely upon government/public data alone. There is a   large industry of private, proprietary data - for example, supplied legally or illicitly, via datamining of credit card databases or by industry insiders, etc. **And this has led major, sophisticated Wall Street players to drop political pressure/support to improve the public data.** Today, in the era of Samuelson's "Frankenstein's Monster," any private data that gives a statistical edge - in topics covered, in reliability and/or timeliness - to major players is worth a great deal of money. This awards a competitive advantage and trillions of dollars can be bet and hedged.

        - As a result, a reasonable forecast for the DNI is that the US government data systems will remain dumber - slower, less reliable, conceptually lagging - unless he provides leadership.

        - It also means that much of the published empirical work by US academic economists (e.g., supported by the US government) is less reliable than it should/could be. There are too many important missing variables. There may be careers and government funds being wasted.

        [By contrast with US government/public systems, the banking system handles and clears almost all of the transactions of the modern global economy reliably and within a few days (i.e., without sampling). Wal-Mart has online sales data for every product, from all of its stores worldwide, updated daily, and used for agile marketing lessons and competitive advantages.]

The Role of the National Academy of Sciences
        The DNI might assume, because the National Academy of Sciences operates a scientific advisory committee on national statistics, that scientists recognize a stewardship duty and are involved, continually, to give us the best, modern and reliable, economic data systems that are possible. By analogy: If we observed that NASA launches to Mars were increasingly missing Mars, and scientists on relevant advisory panels knew that the gravitational and other data and models used by NASA were unreliable, and becoming more unreliable, we could assume that these scientists would provide warnings, and even public warnings, about the problems with NASA missions. This is not a correct model for how the National Academy of Sciences has operated. It is a long story - one component of which is a claim that "the National Academy has never been asked   . . . " . . .   My point, in this memo, is that the DNI also needs to know that automatic self-correcting mechanisms re economic data systems and analysis methods do not operate in the US as he

might assume based on the analogy of the physical sciences.

These failures are an international embarrassment to American social scientists, although I am not sure how many foreign governments do better. And, as Reischauer (the former head of CBO) notes in the attached letter, the disconnections between data systems/models and a changing world have been getting larger for a long time.

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