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The symbiotic relationship between policymaking and statistics:  
From macroeconomic governance  
to evidence-based economic policymaking\*

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# 1 Welcome

President Weidmann

Deputy Managing Director Min Zhu

Ladies and gentlemen

Let me begin by sharing a number of personal insights. Back in the late 1980s, when I was a member of the German Council of Economic Experts, I experienced for myself what it meant to be rubbing shoulders with statisticians. Quite literally so – our place of work was housed in the same premises as the Federal Statistical Office; having statisticians and their "products" at our fingertips, as it were, was hugely valuable for our analytical endeavours.

In October 1990, I became a member of the Deutsche Bundesbank's Directorate and assumed responsibility for the Bank's Economics and Statistics Departments. Being given these two hats to wear was not a chance happening but drove home the close relationship that thrives between those two disciplines. Meaningful economic analysis hinged on high-quality data being available with a minimal time lag. Statistics, meanwhile, were not regarded as an end unto themselves but played a vital part in monetary policymakers' mission to safeguard monetary stability as well as in their dialogue with the general public; the most important means of communication in Germany was the Bundesbank's highly esteemed *Monthly Report*.

Later on, when I moved to the ECB in June 1998 and was put in charge of the economics and research department, I first had to suffer something of a "statistical shock". Remember, politicians had just a few weeks earlier taken the momentous decision and defined the euro area. Back in those early days, there were no data whatsoever on the new currency area apart from the monetary statistics – and when figures did gradually begin to trickle in, they were aggregated data for the 11 member states which were not only riddled with gaps but also a far cry from the quality standards I had been accustomed to at the Bundesbank. On one occasion about a year into my tenure at the European Central Bank, I put forward a report for a Governing Council meeting in which I pointed out that we still had precious little information at our disposal, compared to the data pool which the US Federal Reserve was able to draw on. In any event, the launch of monetary union was like venturing into uncharted waters. That's a point I shall return to later in my speech.

## **2 "Statistics" is the key word of my Keynote Speech**

Those of you who attended the 2014 Forum certainly won't need reminding that the Keynote Speech was held by my esteemed colleague Alan Greenspan, the former Fed chairman who steered US monetary policy between 1987 and 2006. As chief economist of the fledgling European Central Bank, I had the pleasure of witnessing a great number of Alan's speeches and remarks on the topic of the Federal Reserve's monetary policy. What struck me back then was that Alan never actually mentioned the word "money" in any of his speeches. And he is certainly a creature of habit

– his Keynote Speech at the second IMF Statistical Forum didn't once mention the word "statistics"!

I can assure you that won't be the case in my speech today.

### **3 The symbiotic relationship between statistics and policymaking (good theories and good data spell good policy)**

Statistics.

Let me begin by raising a provocative question: can economic policymakers do without statistics altogether? Let's be brutally honest here. It's feasible perhaps, but only with a lot of ifs and buts – that is, only if we stick to analysing incentive mechanisms or to fundamental sovereign rights such as freedom and property rights. Were that the case, unemployment, inflation, external imbalances, public deficits, the ups and downs of the economy and a host of other variables would prove impossible to identify, far less steer.

As my colleague Axel Weber, a former President of the Deutsche Bundesbank, put it: "Without statistics, economic and monetary policy would be blind." That is, policymakers would lose sight of the wellbeing of their own general public; they would be powerless to deliver a measured or robust policy response to solve problems, leaving them with no option but to either sit on the sidelines or rely solely on anecdotal evidence supplied by interest groups. Let there be no doubt that policymakers need to be able to count on reliable statistics.

But that's not all. What's the point of devising profound theories and models for practical economic policymaking if they cannot be confirmed or rejected by using data? And another thing – what's the informative value of data for economic policymakers if those data only come out with a huge time lag? Or if they are not robust because they are frequently revised? How are we supposed to draw international comparisons without a stock of harmonised data? What's the point of legislation requiring policy measures to be evaluated if that legislation does not provide for the necessary data pool? Ladies and gentlemen, from my point of view, the answers are quite obvious.

The relationship between policymaking and statistics can broadly be described as a symbiotic one – politicians need statistics to evaluate the outcome of their measures, to identify dysfunctions and to learn lessons for the future; statistics, conversely, are based on policy decisions. Official statistics would be superfluous if politicians had no need for them and did not pass legislation requiring them to be collected. More often than not, advances and innovations in the statistical realm are spurred by "blind spots" in the data, the omission of which caused economic policy to drift off course – hence the interest among policymakers to close data gaps and model economic activity as comprehensively, reliably and accurately as possible in the shape of statistical data.

Statistics only ever have an analytical value if they are trustworthy and informative – otherwise we wouldn't need them. This sentence might sound simple, but it has considerable practical importance. For one thing, it is premised on the integrity and political independence of the data producer. For another, it implies transparency in terms of the underlying statistical approaches and collection methods. Providers of statistics, confronted with

sometimes forceful demands from academia, the general public and policymakers for data on new phenomena with the shortest possible time lag, must not under any circumstances allow data quality to suffer.

Of course, responsibility for reliable data does not lie with statisticians alone. Economists across the board, whether they analyse macroeconomic relationships or financial stability, should always cast a critical eye at the figures they feed into their increasingly complex models. It is illusory to think that statisticians simply deliver data with a clear-cut informative value. Indeed, those data need to be fitted into an analytical framework. And there are many instances in which mutually opposite theories are backed up by the same set of data. The substance of the findings thus obtained and of the underlying data need to be subjected to rigorous academic debate. That's a topic that should be touched upon more often. Being in a position to properly assess the underlying statistical data is one of the key prerequisites of sound policymaking.

This credo holds true no matter how much statisticians' tasks evolve over time and regardless of the increasing demands which official statistics are expected to meet. Allow me to illustrate the symbiotic relationship that exists between policymaking and statistics by inviting you on a whistle-stop journey back through the history of statistics – a journey that will highlight how the statistical toolkit has evolved over the years and point to the global political milestones that have been catalysts for statistical innovation. Then, once we have reached our destination, we shall see where the new microdata-driven challenges fit into this timeline.

## **4 From macroeconomic governance to evidence-based economic policy-making (new problems call for new data)**

### **4.1 Descriptive statistics and national accounts**

The roots of institutionalised official statistics go back a long way. In the Bible, the story of Christmas begins with the Emperor ordering a census – rulers have always been interested in this and other kinds of data. But let's now turn our focus back to Germany. Even around 250 years ago, policy-making and statistics went hand in hand in Germany, as the "collected data" on "descriptions of public and folk life" were normally politically motivated. For example, the German customs union started conducting regular censuses in 1834 primarily because its income was distributed according to the population count.

The birth of the national accounts can also be traced back to policymakers' need for information. After all, these accounts are a product of the Great Depression; its aftermath led economic policymakers to desire more information in the form of macroeconomic data. Later on, central government took on a more active role and thus likewise needed a broader and deeper range of macroeconomic data so that it could develop and follow up on economic policy measures.

After the Second World War, the German national accounts had to be recreated from scratch because the previous statistical infrastructure had largely been destroyed. Demand became even more urgent: the Allies pressed for the German national accounts to be set up, not least so that they could effectively plan and monitor the performance of the Marshall Plan. At

that time, the Bank deutscher Länder, the precursor to the Bundesbank, produced an estimate of national income based on income tax data which it published in its April 1949 *Monthly Report*. In the same year, an initial methodological study was published, entitled "The calculation of national income ". This document is stored in the Bundesbank's historical archives.

The slow and painful baby steps were quickly followed by giant leaps: upon the reintroduction of the official reporting system, a pool of post-war data could be built up and a methodological framework for the national accounts developed, continuously improved and expanded. During the 1960s, the national accounts gained significance with the entry of Keynesianism into the field of economic policy as the basis for macroeconomic decision-making. In later years, ecological and social aspects in satellites of the national accounts were also taken into consideration. Many of these advancements took place in step with global and European requirements which grew in importance as the world economy became more and more interconnected.

## **4.2 Globalisation is forcing harmonisation**

Particularly during the second half of the twentieth century, the global economy was shaped by increasingly rapid globalisation, which impacted the real economy and – to a much greater extent – the financial markets. As a result of this increasing fusion and faster information and transaction channels, financial crises were able to spread like wildfire across interconnected markets – regardless of national boundaries. This was the case in the second half of the nineties when the crises in South America, Asia and Russia rocked the international financial community.



Of course, with every crisis the question arises as to what caused it and whether it might be possible to detect this cause as a source of risk at an early stage. Naturally, this puts the statistics under the spotlight. It therefore comes as no surprise that, for statistics, these crises represent milestones in the international harmonisation of definitions, methods and publication practices. To be more specific: the sobering realisation that data on many crisis countries were insufficient to assess their macroeconomic situation initiated the International Monetary Fund to create the Special Data Dissemination Standard (SDDS). This standard requires participating countries to make a specified dataset on the macroeconomic and financial situation available to the general public at a defined timeliness and frequency.

The IMF also monitors SDDS observance, not least in terms of the integrity and quality of the data. This creates a reliable information platform, which is a fundamental prerequisite for an economic policy designed to address empirical problems. In actual fact, this voluntary commitment by many countries facilitates their access to the international capital market – or even makes it possible in the first place. This explains why no fewer than 74 countries have joined the Special Data Dissemination Standard since its establishment in 1996.

### **4.3 European monetary policy requires euro aggregates**

Although harmonised official statistics played a role in the European Union (1992) and its forerunner communities, at the end of the nineties the problem of data harmonisation arose from a whole new perspective in Europe: the politically motivated decision to venture into the European Monetary Union

made statistical information on the entire currency area necessary as a basis for decisionmaking under a single monetary policy. Back in 1996, in his foreword to a booklet spelling out the statistical requirements for the Monetary Union Alexandre Lamfalussy, the first President of the European Monetary Institute (EMI), began with the words: "Nothing is more important for monetary policy than good statistics."

As I mentioned, I know from my time as chief economist in the early days of the ECB that good statistics were often in short supply back then. Since the required data on the currency area have to be aggregated from national data, a harmonised data pool is crucial. If consolidated balance sheet figures are compiled – such as a balance of payments for the euro area – additional information about intra-euro-area interconnectedness is necessary.

When I started out at the ECB in mid-1998, we were indeed standing on more than fragile ground in terms of the data situation. We knew almost nothing. The monetary data were reliable, but apart from that, hardly any other information was available. The data that finally landed on my desk was quite problematic: the unemployment figures, for example, were aggregated across the euro area for completely different reference periods.

Our aim was therefore to develop a statistical framework for monetary policy which was as robust as possible. This was one of the reasons why the ECB strategy was not geared exclusively towards just a few indicators or a single analytical instrument, but instead built on a broad foundation using the two-pillar approach, allowing all important indicators to be included.

Good monetary policy does not only call for the right theories, models and rules to be used in a properly scientific manner, but also that they be based on reliable and meaningful data. Due to subsequent revisions, decisions based on unstable data may turn out to be bad choices in retrospect, and this would have had disastrous consequences for the credibility of the newly established ECB, which still had to earn its reputation.

I can still clearly remember an academically very rigorous debate that I had a few months before the launch of the euro with some fellow economists from all over the world who were advocates of inflation targeting. Models which provide reliable inflation forecasts are a precondition for inflation targeting. Such forecasts, in turn, are based primarily on data on the output gap – a variable which, depending on the approach applied, is estimated very differently by various institutes and is also subject to frequent revisions where even the plus or minus sign changes quite often. In IMF and OECD estimates on the output gap of G7 countries between 1998 and 2010, the plus or minus sign was changed in over 50% of cases. I told a proponent of inflation targeting back then: "I am ready and willing to reconsider my opinion if you convincingly show me how we can solve the data problem." I am still waiting for an answer.

Statistics played an important, actually a crucial role, even prior to European monetary union. The Maastricht Treaty defined so-called convergence criteria for accession to the monetary union. While data on long-term interest rates, for example, were unambiguous, this couldn't have been further from the truth for the area of public finances. Here – in brief – the limits of 3% for the budget deficit and 60% for the debt-to-GDP ratio applied. I don't wish to discuss the wisdom of these numbers here. In some cases, however, the

informative value of the data provided was highly controversial. Some national data were characterised, above all, by traces of accounting safety margins – also known as creative accounting. The case of Greece is still being hotly debated.

Even today, I am still asked time and again: "How could you have trusted the data provided?" Well, to put it mildly, the figures looked surprisingly good to me. But what were we supposed to do? Any attempt to doubt the accuracy of the figures would have required better information. But where from? Incidentally, this case triggered an initiative pressing for the independence of national statistical offices and the setting of uniform quality standards.

The United Nations has since adopted its "Fundamental Principles of Official Statistics". They form the basis for the Public Commitment of the European System of Central Banks (ESCB) and the Code of Practice of the European Statistical System (ESS), self-imposed rules which are legally binding.

#### **4.4 Macroprudential policy requires the integration of micro and macro data**

The outbreak of the global financial and economic crisis in 2007-08 probably brought about the biggest turning point in the official statistics' history. The urgent need for additional as well as, in some cases, new types of information was evident and triggered a quantum leap in statistics.

Systemic stability is a characteristic feature of networks – or to be more precise – of systems of networks made up of financial linkages between individuals, institutions and sectors, of which the most critical include

investments, creditor-debtor relationships, insurance policies and derivatives. And this is also the level at which we need to see their statistical description;

- **granular**
  - with a focus on the (financial) linkages, ie "**from whom to whom**".

This will be a recurring theme throughout the conference.

In the years following the crisis, our attention quickly turned to empirical data for a deeper analytical understanding of systemic crises, particularly with regard to how contagion spreads through the various transmission channels and mutual reinforcement mechanisms. An expanded dataset was also urgently required for the macroprudential supervision being set up and the establishment of early warning systems.

The demand for highly granular financial market data practically skyrocketed overnight; it became apparent that action needed to be taken. Disaggregated data were necessary for uncovering the cross-border interconnectedness of the financial sectors and players in different economies, thus exposing risks and contagion channels. Only then is it possible to judge if individual financial institutions or governments are "too big to fail", "too connected to fail" or "too many to fail".

The first report of the Issing Commission, a group of four experts set up to advise the German Federal Chancellor (and the Finance Minister) on the new financial architecture, called for a risk map to be established. It became shockingly clear after the crisis broke out that reliable data on the scale and distribution of risks in the globalised financial markets were virtually non-existent. At meetings of the newly established G20 group, Germany

suggested making the network of international financial relationships and associated risks visible to the supervisory authorities worldwide.

Back in November 2009, the G20 finance ministers and central bank governors issued a set of 20 specific recommendations under the Data Gaps Initiative. The action plans range from financial soundness indicators and the identification of systemically important financial institutions to suggestions of having a stronger sectoral focus in the breakdown of the countries' national and financial accounts. Real estate prices, distributional aspects and capturing data on the shadow banking industry are all also on the to-do list. As underlined in the sixth progress report on the Data Gaps Initiative in September this year, many of the recommendations have either already been implemented or are close to implementation.

At the same time, existing data initiatives have also been expanded. For example, the IMF built on the SDDS and launched the much more rigorous SDDS Plus data standard. To enable a better assessment of financial stability, countries adhering to SDDS Plus are required to disseminate data in nine additional data categories. Taken together, these should give a better picture of risks in the financial sector, cross-border linkages and the vulnerability of an economy to external shocks. At the end of last year, the United States, Germany, France, Italy, Spain, the Netherlands, Portugal, Sweden and the Philippines committed to observing this ambitious data standard and, while some work is still required, have already begun publishing sets of indicators.

All of these developments highlight the significance of micro data. Granular data are necessary for describing interdependencies and for facilitating the

development of a comprehensive matrix of linkages between individual economies, economic sectors or economic units possible for individual data categories. A further step is the integration of micro and macro data, which are nothing other than complementary perspectives to consider when evaluating various aspects and questions relating to the same phenomenon. Based on a systematic and broad analysis of micro and macro data in parallel, for example, informed statements can be made about the growth dynamics within a sector.

#### **4.5 Two examples: SHSDB and new euro money market statistics**

We have already come a long way in setting up flexible, multi-dimensional microdatabases which are able to quickly provide users with their desired datasets – and we will resolutely continue along this path. I'd like to briefly discuss two examples which are of particular relevance from a European perspective. It is no coincidence that both take the “from whom to whom” approach. First of all, there is the Securities Holdings Statistics Database, a microdatabase that builds on what was already in place. And second, there are the new euro money market statistics, which will be established in the coming days and months.

I consider the example of the Securities Holdings Statistics Database to be particularly important as it shows that the significance of micro data for analysis and policy-making was known and acted upon even before the financial crisis. Security-by-security data on holdings at financial institutions domiciled in Germany have been collected for the securities holdings statistics since 2005 – that is, before the financial crisis and macroprudential policy had shaped the new need for micro data.

In addition, the rapid evolution of these particular statistics reflects the increased pressure to act sparked by the crisis. At first, only quarterly data were available in 2005, but as of January 2013 the collection frequency was switched to a monthly cycle as part of the ESCB's Securities Holdings Statistics Database project. The Bundesbank has also set up a Research Data and Service Centre in recent years, so that this and other sets of micro data can be used not only for internal analysis, but also made available to external researchers – with strict regard to data protection and confidentiality.

My second example represents an entirely new form of micro data collection, which should serve the purpose of policy evaluation, in particular. I'm speaking of the new money market statistics for the euro area, which are due to be introduced in mid-2016. Despite the importance of the money markets – for the functioning of the financial system and as a transmission channel for monetary policy – granular information on individual transactions has so far been hard to come by. To date, just a few reference banks have reported aggregates for their daily lending. The ESCB therefore also sees the new granular money market data collection as a launch pad for new ways of analysing the monetary policy transmission mechanism. It is also hoped that the comprehensive picture of the particulars of the euro-area money markets will allow us to detect disruptions at an early stage and determine the need for monetary policy action.

To conclude this short list of examples, I must issue a brief critical reminder of something that the data compilers among you, who are in close contact with reporting agents, are faced with on a daily basis. As positively as we view the availability of additional micro data that can be flexibly analysed, we



always have to take into account the extra burden on the reporting agents. The compilation of new data should therefore always be preceded by a thorough and impartial cost-benefit analysis. Ultimately, these kinds of granular data collection systems also come with the medium-term expectation that the reporting burden for statistics that are traditionally aggregated is suspended or at least reduced, since the required information is already contained in the granular databases. In other words, the idea is to collect data only once. And those entities required to report data must, of course, be firmly assured of the fact that their data will only be used for the purposes laid down in law.

## 5 Conclusion

We live in a world of increasingly rapid change, which the official statistics have to reflect. This forces them to meet new requirements but also opens up opportunities which need to be identified and exploited. Huge advances in the collection, processing and supply of ever larger datasets are being made in the digital age. In many cases, they have set the stage for the statistical-methodological developments of recent years.

Despite – or even because of – the explosion of available data, there is one thing we mustn't forget and should also communicate openly: official statistics can only ever attempt to depict the ever more complex economic relationships in an approximate way. And in doing so, it will come up against barriers again and again: the eternal conflict faced by all data compilers between data timeliness and data quality will always exist. There will also

continue to be blank spots on the data map. After all, no sooner are gaps in the data closed than new ones suddenly appear.

Financial innovations thus continue to cause headaches for statisticians. They are, by definition, “new” – with unforeseeable implications not only for statistics. A great deal of work is still required to ensure that they do not completely fall through the existing collection scheme; we also need to prevent them from causing distortions in key data series. A particular problem is posed by those new instruments that are not standardised products and are not traded centrally.

Economic policy and statistics, in their symbiotic relationship, must continually face these challenges, so as not to be a feeding ground for the next crisis. History has taught us the painful lesson that the next crisis always emerges precisely where we are not observing or measuring. Coming up with further thoughts and advances in this area is the aim of our conference: Official Statistics to Support Evidence-based Economic Policymaking.

Thank you for your attention.