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Linked Incidence-Detail Outputs for Defined Contributions using the NCS

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Abstract: This paper describes a methodology for combining the data sets underlying the National Compensation Survey (NCS) publications reporting on: a) the incidence of benefits among workers and b) the detailed provisions of the benefits in which workers participate. The combination of these datasets allows the construction of new statistics that estimate the extent to which workers have access to benefit plans with specific attributes, as well as the extent to which they take up such plans. The methodology is applied to Defined Contribution retirement plans offered to private industry workers in 2008.

Linked Incidence-Detail Outputs for Defined Contributions using the NCS

In this paper, I work through the exercise of combining the microdata underlying two different National Compensation Survey (NCS) publication types to produce new statistical measures describing employer-provided, Defined Contribution, retirement benefits among US private industry workers. The two publication types are:

- NCS publications reporting the incidence of (the rates of access to and participation in) Defined Contribution benefits among the working population. These publications are released annually under the title "Employee Benefits in the United States – March ????," where "????" corresponds to the current year.[1]
- NCS publications reporting on the prevalence of particular features among the Defined Contribution in which workers participate. These publications are produced less frequently than the incidence publications, depending on the particularities of the NCS's rotating panel, and on other NCS program priorities. The most recently produced version pertaining to retirement benefits is "National Compensation Survey: Health and Retirement Plan Provisions in Private Industry in the United States, 2012."[2]

Combining the microdata underlying these two publications enables the estimation of three new types of measures:

- Unconditional Participation in Provisions measures showing the frequency of workers participating in plans with certain features, among the *entire population*[3] of US private industry workers. For example, one such measure would estimate the percentage of private industry workers participating in a Savings and Thrift plan.
- Access to Provisions measures showing the rate at which workers have the opportunity to participate in plans with particular features, regardless of whether they participate in them. For example, one such measure would estimate the percentage of private industry workers having access to a Savings and Thrift plan.
- Take-up of Provisions measures showing the rate at which workers participate in plans with particular features when they have access to them. This measure would be calculated as the ration of the two measures above.

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[1] The most recent benefit incidence publication, for March 2014, can be found here: http://www.bls.gov/news.release/pdf/ebs2.pdf ; additional publications can be found in the National Compensation Survey Publications archive at: http://www.bls.gov/ncs/ncspubs.htm . The edition I work with in this paper, from March 2011, can be found here: http://www.bls.gov/ncs/ebs/benefits/2011/ebbl0048.pdf .

[2] This report, available at: http://www.bls.gov/ncs/ebs/detailedprovisions/2012/ownership/private/ebbl0053.pdf, was published in December 2013. The edition I work with in this paper, pertaining to 2010, can be found here: http://www.bls.gov/ncs/ebs/detailedprovisions/2010/ebbl0047.pdf .

[3] Some minor restrictions apply, owing to NCS sample design, which excludes some classes of workers such as self-employed workers and workers with an ownership interest in their employers, and which samples aerospace industry workers separately.

It's intuitive that users of NCS data might generate their own estimates of the first new measure type (unconditional participation in provisions) by combining the estimates they find in the available publications. For example, the March 2011 incidence publication shows that 41 percent of US private industry workers participate in a Defined Contribution plan[4], and the 2010 detailed provisions publication shows that 68 percent of US private industry workers who participate in a Defined Contribution plan participate in a Savings and Thrift plan. One might multiply these two figures to estimate that 28 percent of US private industry workers participated in a Savings and Thrift plan in 2010. However, such a calculation produces a non-rigorous estimate of the true unconditional participation rate: differing samples, time frames, and aggregation concepts underlie the two measures it multiplies. Furthermore, users have even less recourse to compute any reasonable estimates from existing NCS publications of measures like access to and take-up of provisions.

Microdata

To develop a method for generating the new estimates of interest, let us start by describing the structure of the relevant microdata, paying particular attention to the timeframes applicable to the collection of different data items. The NCS are collected using a panel structure, in which 3 - 5 "rotation groups" are present at a given time[5], with each rotation group individually representative of the population of private industry workers, subject to some exclusions. Approximately once a year, a new rotation group enters the panel, and the oldest rotation group (having remained in the sample for about 3-5 years) is dropped.

Each regular, private industry rotation group is made up of establishments that are randomly selected from the population of private industry establishments. Within each establishment, a random sample of jobs is selected, for which the NCS collects a variety of compensation information. During the time period that establishments are in the panel, the NCS collects, for each selected job in each quarter, separate compensation costs for wages and about 20 different categories of non-wage benefits. The collected cost data are used to compute the Employment Cost Index (ECI) and Employer Costs for Employee Compensation (ECEC),

Prior to entering the panel, each rotation group undergoes a period of initiation, during which jobs within each establishment are sampled and a host of preliminary data collection takes place. Since the initiation of each establishment is very time consuming, the initiation process for a given rotation group is spread out over a year. To accommodate this process, the rotation group is split into 4 sub-samples, with each sub-sample assigned to an initiation quarter. After the four quarters of initiation are

[4] Note: the March 2010 publication also shows Defined Contribution participation at 41%; users might logically reference this estimate in performing the type of calculation described here. However (as described in this paper), due to the way the underlying microdata are structured, it is useful to reference the March 2011 data.

[5] This 3-5 figure includes neither the sample of state and local government establishments, nor the special samples devoted to the aircraft industry that the NCS maintains. Prior to 2011, the NCS panel was based on a 5-rotation-group design, but currently it is transitioning to a 3-rotation-group design: in 2014 there were 4 groups in the private industry sample (excluding aircraft).

completed, there is an intervening quarter for various processing tasks to be completed; the group then enters the panel the succeeding quarter.

During this process, the NCS also accumulates several other pieces of information. Let us focus, in particular, on three items:

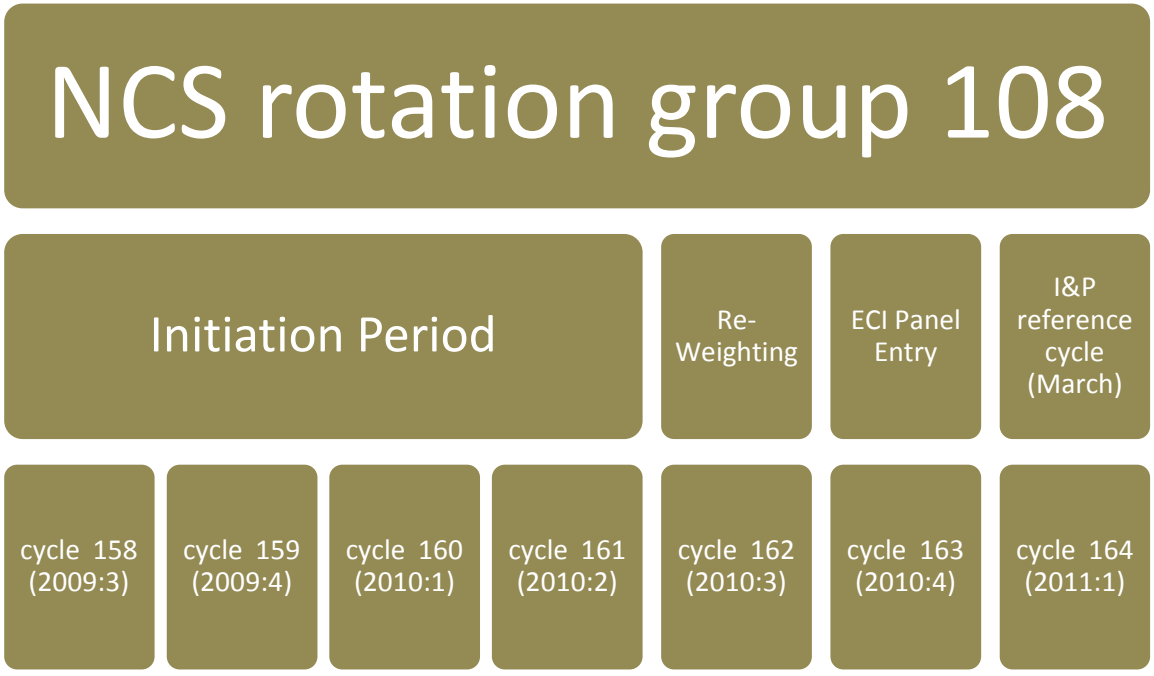
1. Incidence Data: Two types of incidence data are collected. The first is "access," which is collected at the job level and indicates, for a given benefit area, whether a plan exists which is applicable to the workers in the job. The second is "participation," for which there are two forms of data collected. The primary participation item is a plan-based rate, indicating for each applicable plan in each job, the percentage of the job's workers "participating" in that plan.[6] For benefit areas like Defined Contribution, where more than one plan might apply to the same job, another participation rate is collected, measuring, at the job level, the percentage of the job's workers participating in *any* plan within the benefit area. This measure is called the "unduplicated" participation rate, for it nets out workers in the job who participate in more than one plan. Both of these participation rates and the access variable are collected in every quarter collection is carried out, including the quarter of initiation, the post-initiation processing quarter, and every quarter a job is in the panel.
2. Detailed Provision Data: The NCS collects information about the detailed provisions of health and retirement plans by obtaining the plan brochures that employers use to describe the plans to their employees. The relevant features of the plans are then extracted from the brochures by NCS analysts and entered into the NCS database. It's important to note that these plan features are only collected once – in the initiation quarter[7]– and are not updated in subsequent quarters. Thus, as an establishment enters the NCS panel, the data for the detailed provisions of any health or retirement benefit plan provided by the establishment are already possibly dated. As the establishment remains in the panel over five years, the detailed provisions data collected for the plans offered by the establishment during the time it was initiated into the sample become less and less current.
3. Job-level population weights: The NCS generates and maintains weights for each job-level observation that it uses to aggregate its data into estimates of the corresponding population parameters. These weights originate in the sampling process, where the units composing each rotation group are randomly chosen; they subsequently undergo several refinements to adjust

[6] Participation is regularly collected for 6 benefits: Life Insurance; Health Insurance; Short Term Disability; Long Term Disability; Defined Benefit Pensions; and Defined Contribution Pensions. Generally, workers are considered to participate in a plan if they are eligible for the plan and have taken the necessary steps to receive the plan's benefits (e.g., filling out an enrollment form, or, in some cases, *not* filling out a disenrollment form). Participation in a benefit plan may or may not entail the incursion of some cost (e.g., an employee-paid health premium) on the part of the worker.

[7] Each sample unit in the rotation group observation is assigned to a particular quarter during the initiation year; generally, this quarter is the quarter in which the SPD is collected. However, NCS initiation goes on for the entire year, so there may be exceptions where the SPD is collected in a different quarter than assigned.

for various factors such as non-response, attrition, and compositional changes in the economy.[8] But one refinement (and its timing) is especially noteworthy: the adjustment of the weights applied to each rotation group to account for establishments that refuse initiation (and therefore do not enter the panel). This detailed non-response adjustment is carried out in the first quarter after the initiation period closes. It is important to note is that this weight adjustment, necessary to generalize the rotation group's collected data, is not available until 1-4 quarters after the detailed provisions data have been collected.

To illustrate the chronology of the processes described above, consider rotation group 108, which entered the NCS estimation panel in the December of 2010. This rotation group underwent initiation during the four quarters lasting from June 2009 to June 2010. It then underwent weight re-adjustment during October 2010, and finally entered the NCS estimation panel in December 2010. The first incidence publication to which rotation group 108 contributed was the March 2011 edition.

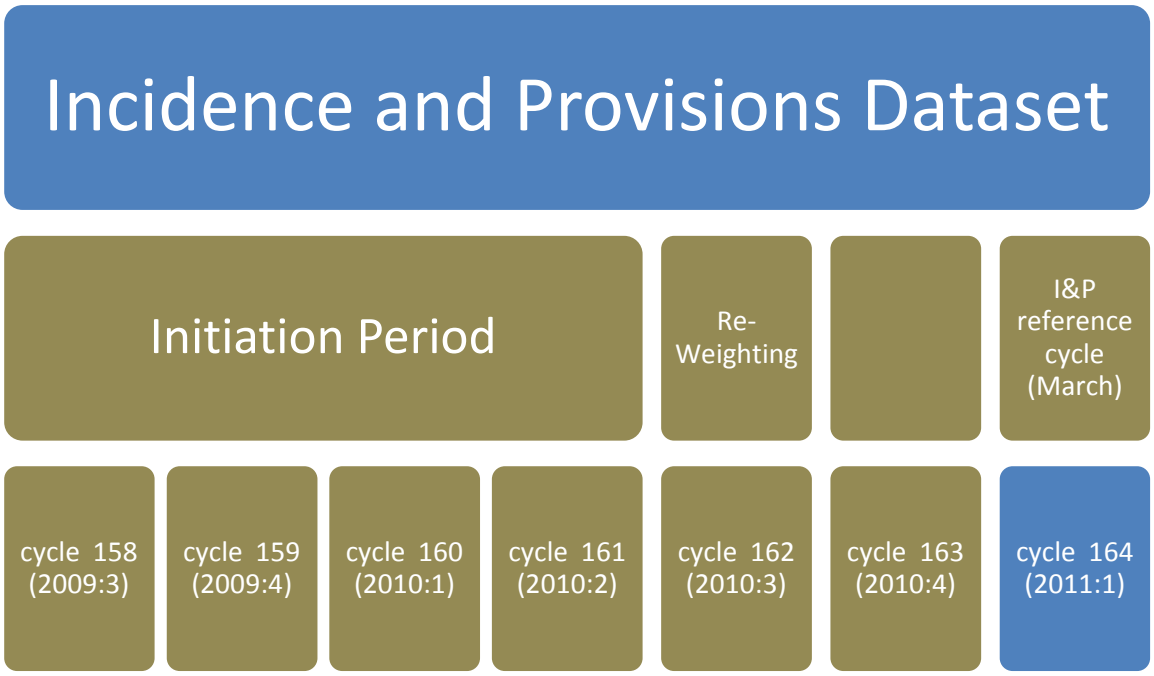


[8] For more details about the evolution of the weights in the NCS estimation system, see McCarthy, Ferguson and Ponikowski, "The Weighting Process Used in the Employer Costs for Employee Compensation Series for the National Compensation Survey," 2011.

Publication Data Sets

As described at the outset of this paper, these microdata are used to produce annual estimates of benefit incidence, and less-than-annual estimates of the frequency of various detailed provisions among plan participants. In this section, I describe the data sets underlying these two different publications.

The construction of the data set underlying the incidence publication is relatively easy to describe. It is produced each March, and it uses all incidence data collected in that month, including all five active rotation groups representing private industry employers in general, plus a separately collected group dedicated to establishments in the aerospace industry. A separate group comprising state and local government establishments is also included for estimates pertaining to the entire civilian population (and for separate estimates pertaining to public sector workers). The sample definition, the weights, and all the data components correspond to the first quarter of the corresponding year, and the reference month is recorded as March.[9]

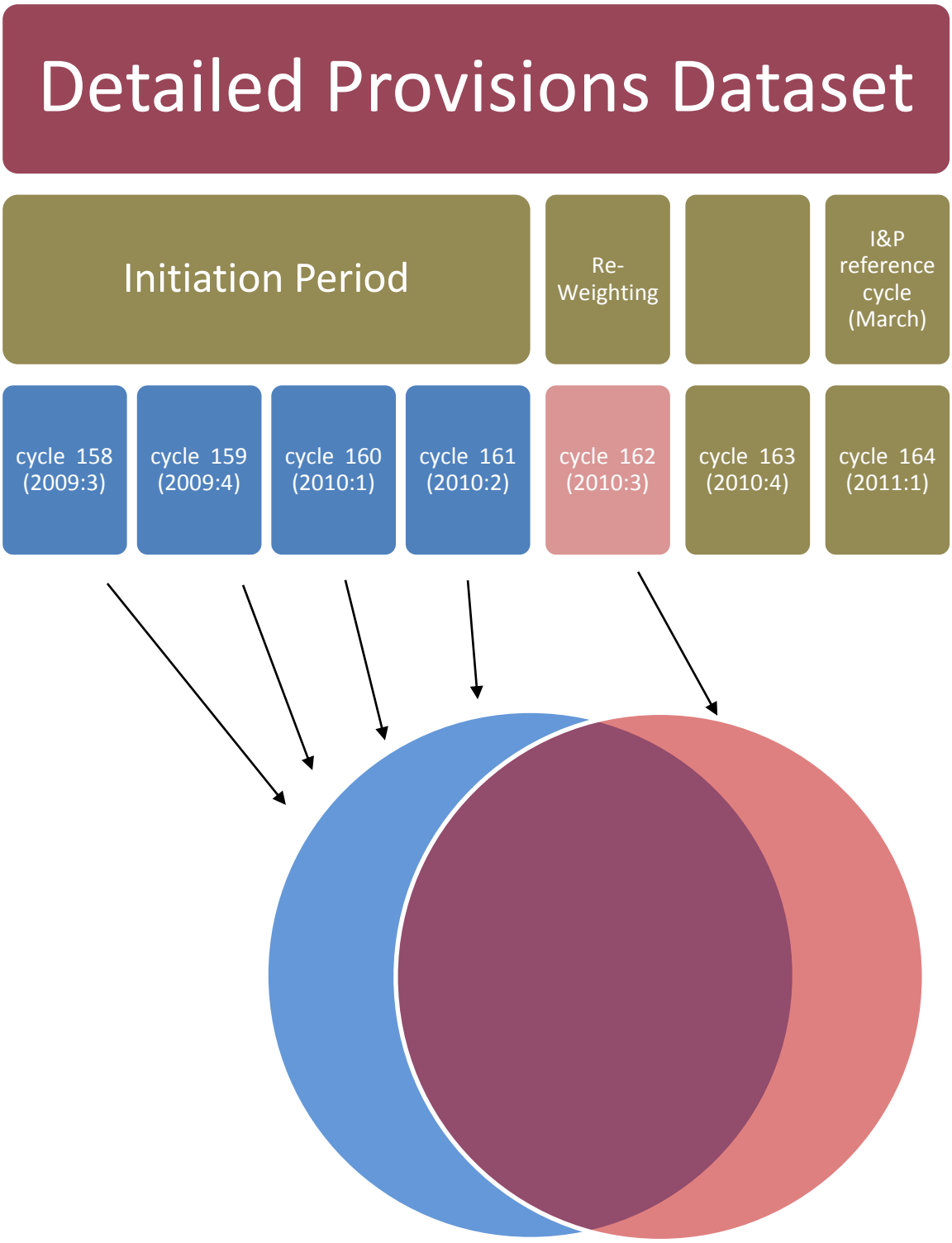


(Note: the Incidence and Provisions dataset includes data from all active rotation groups – in 2011:1 this included groups 103, 104, 106, 107 and 108, as well as aircraft group 105 and government group 901.)

Construction of the dataset underlying the detailed provisions publication is less straightforward. The detailed provisions estimates must combine the four key variables described above: plan-level participation rates, job-level (unduplicated) participation rates, plan details coded from plan brochures, and job-level weights that have been adjusted for initiation non-response. But note: these variables

[9] More specifically, the reference date refers to the week that includes March 12th.

cannot all come from the same time period. The detailed provisions data themselves must come from the initiation quarter, when plan brochures were collected, whereas the weights must come from the first quarter after initiation has ended, when non-response adjustments are made, or some later time period. Hence, the estimates must combine data items from different quarters. Conceptually, this implies that some assumptions about sample attrition and/or the nature of variable changes over time must be made to rationalize the estimates. Here is how the NCS proceeds. It merges the initiation sample with the sample as of the time of non-response re-weighting, retaining only the benefit plans that were present in both periods. It then uses the plan-based participation rates and the weights from the latter period and the detailed provisions from the former period, and it estimates job-based (unduplicated) participation rates from the plan-based rates within the merged sample.



(The purple area, representing the intersection of the plan samples from the different time periods, is the basis for the detailed provisions dataset. Participation and weight values come from the re-weighting cycle, while the provisions themselves come from the initiation cycles.)

This construction is consistent with the maintenance of several assumptions about the underlying data (and sample attrition):

1. Independent attrition: Here, we assume that the attrition of the sample itself (e.g., establishments going out of business) between the initiation period and the re-weighting period is random with respect to the parameters being estimated. For example, this assumption implies that an establishment with one kind of Defined Contribution plan is no more or less likely to go out of business than an establishment with another kind of Defined Contribution plan.
2. Independent plan "newness": The merged sample does not include benefit plans that are active as of the re-weighting period but were not present during initiation. We assume that whether a plan present in the latter period had been established as of the initiation period is random with respect to the parameters being estimated. This assumption guarantees, for example, that the distribution of plan types among the merged sample is the same as the distribution of plan types among all plans that are active in the latter (re-weighting) period.
3. Maximum overlap of plans within type, minimum overlap of plans between type: Because the merging of datasets causes many plans to be excluded from the sample[10], even among the sample of jobs that survive between periods, the collected version of job-based (unduplicated) participation is not appropriate for the estimates. The NCS computes its own estimate of the unduplicated participation rate by applying some rules of thumb based on plan type.[11] The underlying assumption is that this procedure produces an unbiased estimate of the unduplicated participation rate pertaining to those plans in the merged sample.

Subject to these assumptions, the detailed provisions estimates that are generated from the merged dataset can be considered unbiased estimates of the population parameters as of the re-weighting period. For example the detailed provisions publication reporting on the provisions collected for rotation group 108 in 2009:3 – 2010:2, using the sample weights and participation rates as of 2010:3, would have the reference date of October 2010.

[10] For example, in merging the initiation-based sample with the re-weighting-based sample for rotation group 108, 10,872 establishment-job-plan observations match up, while 519 observations from the initiation period (plans that were discontinued between initiation reweighting) and 639 observations from the re-weighting period (plans that were introduced between initiation reweighting) do not.

[11] During production of the detailed provisions bulletin, the new estimate of unduplicated participation is computed as follows: within each plan type (e.g., Savings and Thrift), the maximum of the observed plan participation rates for each job is determined. If more than one plan type is observed for a given job, the (maximum) participation rates for each plan type are added together, and the sum is trimmed back to 100 percent if necessary. This process embodies the assumptions that: a) the workers in the job who participate in one plan of a given type are the same workers who participated in other plans of the same type; and b) workers in a job who participate in a given plan type are unlikely to be the same workers who participate in another plan type.

Linked data outputs: a game plan

One downside to the methods used to construct the data sets for the two different publications is that merging them to produce one dataset (from which to estimate linked outputs) is not straightforward. Indeed, because each dataset is assembled with a specific output in mind, neither is suitable for adaptation via a simple incorporation of additional variables.[12] Instead, to produce linked incidence-detail estimates, it is necessary to create a new data set, with its own concept and its own underlying assumptions. In this section, I lay out the design of a linked incidence-detail data set and discuss the assumptions implicit in its use for estimation.

Like the detailed provisions dataset described in the last section, the linked incidence-detail data set uses details from the initiation period and weights from the re-weighting quarter. But conceptually, it is situated in the former time period instead of the latter, and it re-benchmarks the weights back to that period. It therefore draws its participation data from the initiation period. Conveniently, it uses all of the plans identified in that period for each job in the sample, which means that no plans are excluded except for those corresponding to jobs that leave the sample by the re-weighting quarter. Consequently, the collected job-level (unduplicated) participation rates are appropriate to use, in either the denominator of conditional detail estimates like those produced in the current detailed provisions publication, or directly as benefit-level participation rates like those produced in the current incidence publication.

Conceptually, this data set requires one major assumption, equivalent to the first one outlined as underlying the current detailed provisions publication – that of "independent attrition." Again, we assume that attrition of jobs and establishments from the sample is random with respect to the detailed provisions parameters themselves. The only difference is in the interpretation. Whereas the current publication uses this assumption to imply that the jobs in the merged data set are representative of the jobs existent in the re-weighting quarter, we now use the same assumption to imply that they are representative of the jobs existent in the initiation period.[13] With this interpretation, we can identify the reference date for the outputs as the average quarter of the initiation period.

[12] Why is the provisions dataset incompatible with the notion of simply estimating the access rate by including NP units? We have already dropped from the re-weighting cycle units that acquired or dropped plans between initiation and reweighting. We can assume that this does not affect the composition of plan characteristics among the observed plans. But we can no longer recover the access rate (unless we also dropped a bunch of NPs, but we have no recourse for doing so). Why is the I&P database incompatible with bringing in the details? One could presumably bring the details all the way forward to the I&P publication quarter, but that would entail a bunch more attrition, would require some sort of imputation or re-weighting, and the attendant, heroic assumptions.

[13] This duality exists because the assumption being made posits a sort of steady-state of sample composition. Therefore, it can be used to imply that the sample is representative of either period.

Carrying out the game plan: Transforming the Production Data Sets

To demonstrate this approach to creating a linked incidence-detail dataset, and to illustrate the relationship between this dataset and the separate datasets used to publish NCS estimates of incidence and detailed provisions, I now work through an exercise in which the separate NCS production datasets are transformed, one step at a time, into a linked dataset embodying the design described above. The exercise exploits the data from NCS rotation group 108 described earlier, focusing only on records related to Defined Contribution estimates.

Transforming the Incidence Data Set

I begin by transforming the dataset used to produce the Incidence and Provisions data in 2011, as reported in "Employee Benefits in the United States – March 2011." The first step to making NCS incidence data set amenable to merging with the most recent detailed provisions data set is to limit it to only the most recent rotation group. Table 1 documents the impact of this step. The top portion of the table shows a re-creation of the top-level, Defined Contribution incidence measures as reported in Table 2 of the publication. In the first quarter of 2011, NCS estimated that 54 percent of the civilian workforce had access to a Defined Contribution plan, with breakouts of 58 percent and 30 percent for private industry and public workers, respectively. The corresponding figures for participation rates were 37, 41 and 17 percent. Table 1 proceeds to report on separate measures created using individual, non-aerospace, private industry rotation groups, as well as their averages. Since aerospace workers tend to have a relatively high incidence of Defined Contribution plans, the non-aerospace sample produces slightly lower incidence rates than the overall private industry sample (access of 56.6 percent and participation of 39.9 percent). Around these averages, the individual rotation group participation rates vary about 2 percentage points in either direction, from 38.2 to 42.2 percent. The most recently added rotation group – group 108 – happens to produce measures that are close to the average (access of 55.8 percent and participation of 39.5 percent).

Table 2 depicts what happens to the access and participation rates for rotation group 108 as its reference date is moved back in accordance with the game plan described above. The first row re-states the group-specific rates from Table 1. In the second row, the rates are re-calculated using the data collected for rotation group 108 in the third quarter of 2010. This exercise turns back any attrition in the sample that occurred between this quarter and 2011:1, as well as incorporating the observed values and the sample weights corresponding to 2010:3. The third row adjusts the calculation by using access and participation values collected during the period when the rotation group was initiated (July 2009 – June 2010), although it performs this calculation only over those establishments/jobs that were still present in the 2010:3 sample. The fourth row further adjusts the calculation by re-benchmarking the weights used in the calculation to the initiation period. None of these adjustments seems to change the rates very much, and what small changes occur seem to cancel each other out. The net effects of the transformation of the rotation group's data set into one suitable for combination with the detailed provisions data collected in July 2009 – June 2010 are minor increases in the top-level access and participation rates (from 58.8 percent to 58.9 percent, and from 39.5 percent to 39.7 percent, respectively).

Transforming the Detailed Provisions Data Set

Next, I turn to the transformation of the dataset underlying NCS detailed provisions publications into one that is suitable for combination with incidence data, in accordance with the game plan described above. Table 3 depicts the step-by-step impacts of the transformation on a breakout of Defined Contribution participation by plan type. The first column presents a re-creation of this breakout as reported in Table 20 of "National Compensation Survey: Health and Retirement Plan Provisions in Private Industry in the United States, 2010." That table shows that 68 percent of Defined Contribution participants participated in a Savings and Thrift plan, with corresponding figures of 25 percent and 19 percent for Deferred Profit Sharing plans and Money Purchase plans, respectively.[14]

Moving across the columns of Table 3 from left to right, we see the cumulative effects on the plan type breakouts of succeeding changes to the underlying data set. The second column shows the effects of a re-benchmarking of the weights applied to data set units, while the third column adds a switch in the plan-level participation values used from those observed in 2010:3 to those observed in the initiation period (2009:3 – 2010:2), when the plan types themselves were observed. In the fourth column we include all plan-level observations collected in the initiation period for jobs present in 2010:3, and in the fifth column we report on a re-benchmarking of the weights to the initiation period. Finally, in the last column, we use the job-level (unduplicated) participation rate in the denominator of the computation that was collected for jobs, rather than estimating one from the plan-level rates. As with the changes to the incidence estimates in Table 2, these changes don't seem to affect the estimated breakouts very much, either individually or in combination. Only one of the estimates in the table – the estimate for Deferred Profit Sharing plans in the final column – differs by as much as half of a percentage point from the estimates we began with in the left-most column.

Linked Incidence-Detail Outputs for Defined Contribution

Having transformed the datasets from the NCS's March 2011 incidence and 2010 Detailed Provisions publications into formats that are amenable to combination, we can now compute the 3 types of new estimates described at this paper's outset: unconditional rates of participation in plan with particular features; access rates for such plans; and the corresponding take-up rates. Table 4 presents an example of such estimates, relating to the distribution of Defined Contribution plan types. We see here that 42.1 percent of private industry workers have access to a Savings and Thrift plan, which accounts for more than three quarters of the 55.9 percent of workers having access to at least one type of Defined Contribution plan. Participation in Savings and Thrift plans, however, are estimated at only 27.1 percent of workers, owing to a take-up rate of only 64.5 percent. As noted earlier, users of NCS data might combine the published estimates of Defined Contribution participation (41 percent in 2010:1 and 2011:1) with the published rate at which Defined Contribution participants are enrolled in Savings and Thrift plans to conclude that the unconditional participation rate of private industry workers in Savings

[14] Note: because some workers participate in more than one type of Defined Contribution plan, these figures can (and do!) sum to more than 100.

and Thrift plans was about 28 percent in this time period; such an estimate, it turns out, would be pretty close. But here we have added significantly more rigor to the analysis, as well as producing access and take-up rates to put the participation rate into context.

Table 5 provides some additional measures of access, (unconditional) participation, and take-up for specific provisions seen in Savings and Thrift plans. The first row of the table shows the "All Savings and Thrift" figures seen in the second row of table 4; beneath that are percentages of the population having access to and participation in Savings and Thrift plans with particular features. We see that 7.4 percent of private industry workers had access to a Savings and Thrift plan with an automatic enrollment provision in this period. Take-up among these plans was 75.3 percent, so that 5.6 percent of workers participated in them. Note that this last figure is about 21 percent of the overall participation rate (27.1 percent) in Savings and Thrift plans recorded at the top of the table; in this way our estimate comports with Table 22 of the 2010 Detailed Provisions publication which reports this 21 percent figure. But again, we have now placed the 21 percent figure into context by consistently generating estimates of its component parts.

Conclusions

This exercise has shown that it is possible to create estimates that rigorously link the two main outputs of the Employee Benefits Survey – the incidence statistics reporting on benefit coverage for the entire population of private industry workers, and the detailed provisions statistics reporting on the particulars of the plans in which workers participate.

Producing estimates from such a linked database has several attractions. For data users who already attempt to compute population-based estimates of plan provisions, it would provide a rigorous alternative to the cobbling together of published numbers. For data users who consult EBS detailed provisions bulletins in isolation, it would provide helpful context to the numbers they see. It would also result in new measures like access to and take-up of detailed provisions that are not available in the current suite. Another advantage is that the underlying assumptions needed to justify the estimates are lighter than the current approach to detailed provisions estimation entails; in particular, the unduplicated participation rates as collected at initiation can be used, rather than relying on a proxy derived from the plan-based rates.[15]

On the other hand, there are a few drawbacks. First, the participation rates collected at initiation, used here, may be less reliable than the rates used in the current publications. And second, the linked database provides a different, noisier measure of incidence than the published numbers, because it relies on only one rotation group rather than pooling several. Presumably, publication of these

[15] Another example of the practical advantage of lightening the conceptual load was seen in a recent episode, where an influential sample unit dropped a plan and replaced it with another between the time of initiation and re-weighting. Under the current approach, the unit dropped out of the sample, which had a noticeable effect on the published estimates. Under the linked approach described here, this unit would have kept its initiation-period plan, averting the issue.

alternative numbers would have to be accompanied by an explanation of the inherent sampling error differences. Looking at the exercise performed here, though, it seems that these drawbacks are manageable. None of the transformations in the data required to link the two datasets appear to have created a large departure or uncovered a large inconsistency in the publications.

Table 1: March 2011:1 Access and Participation in Defined Contribution Plans

	Access	Participation	Take-Up
All Civilian	53.9%	37.1%	68.9%
Private Industry	58.3%	41.0%	70.2%
State & Local Government	30.3%	17.0%	55.9%
By rotation group			
103	59.3%	42.2%	71.1%
104	58.0%	40.3%	69.4%
106	56.1%	39.1%	69.7%
107	53.6%	38.2%	71.3%
108	55.8%	39.5%	70.7%
Private, excluding aerospace	56.6%	39.9%	70.5%

Table 2: Rotation Group 108 Defined Contribution Access and Participation: variations in sample definition

	Access	Participation	Take-Up
March 2011 sample and values, pre-publication data and weights	55.8%	39.5%	70.7%
September 2010 sample, weights and values	55.3%	39.3%	71.1%
September 2010 sample and weights, initiation period values	55.7%	39.5%	71.0%
September 2010 sample, initiation period values, weights benchmarked to initiation period	55.9%	39.7%	71.0%

Table 3: Rotation Group 108 Participation by Plan Type Among Defined Contribution Participants: Variations in Sample and Methodology

	Sample = all plans matching from initiation to 162			Sample = all non-attritting establishment-jobs		
Plan Type	As Published	Re-benchmarked to 2010:3	Initiation-Based Participation	Initiation-Based Participation	Re-benchmarked to 2009:3 - 2010:2	Job-Based Partic As Collected
Deferred Profit Sharing	24.6%	24.9%	25.2%	24.8%	24.9%	25.2%
ESOP	3.6%	3.5%	3.5%	3.5%	3.5%	3.6%
SIMPLE	2.4%	2.5%	2.7%	2.7%	2.6%	2.7%
Money Purchase Plan	18.8%	18.4%	18.6%	18.7%	18.7%	19.0%
Other	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%
SEP	0.9%	1.0%	1.0%	0.9%	1.0%	1.0%
Savings and Thrift	68.2%	67.6%	67.7%	67.4%	67.4%	68.3%

Table 4: Defined Contribution Access, Participation and Take-Up by Plan Type, Private Industry Workers*, 2009:3 - 2010:2

	Access	Participation	Take-Up
All Defined Contribution	55.9%	39.7%	71.0%
Savings & Thrift	42.1%	27.1%	64.5%
Money Purchase	9.1%	7.5%	83.1%
Deferred Profit Sharing	11.7%	10.0%	85.2%
ESOP	1.7%	1.4%	83.9%
SIMPLE	2.2%	1.1%	48.7%
SEP	0.5%	0.4%	70.1%

* Note: aerospace industry workers are excluded.

Table 5: Incidence of Savings and Thrift Plans with Certain Provisions, Private Industry Workers*, 2009:3 - 2010:2

	Access	Participation	Take-Up
All Savings and Thrift	42.1%	27.1%	64.5%
Savings and Thrift plans with:			
Option of Roth plan	11.9%	8.2%	68.7%
Choice of Investment (ER contributions)	32.1%	21.0%	65.5%
Automatic Enrollment	7.4%	5.6%	75.3%
Lump Sum Withdrawal	12.8%	8.5%	66.5%
Annuity Option	5.9%	4.1%	70.3%