THE SURVEY OF INCOME AND
PROGRAM PARTICIPATION

INFORMAL MECHANISMS FOR GOVERNMENT DECISION-MAKING: CASE STUDY OF A TEAM APPROACH TO REDESIGNING THE SURVEY OF INCOME AND PROGRAM PARTICIPATION

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INFORMAL MECHANISMS FOR GOVERNMENT DECISION-MAKING: CASE STUDY OF A TEAM APPROACH TO REDESIGNING THE SURVEY OF INCOME AND PROGRAM PARTICIPATION

by Daniel H. Weinberg[1]

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I. INTRODUCTION

Government decision-making can often get bogged down in formal committees ill-suited for decisions. This paper reports on a case study in one government agency where gridlock was avoided by the establishment of an alternate mechanism--formation of a specialized team.

The U.S. Bureau of the Census has only recently (1990) adopted Total Quality Management (TQM) to improve its customer service.[2] All employees have been trained in TQM, with senior staff and selected others receiving intensive training. Key to success in a TQM environment is collaboration and sharing of responsibility in a team environment (see Katzenbach and Smith, 1993, for a discussion of teams). A crisis in management of a particular survey operation provided the impetus for application

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1. The author is Chief, Housing and Household Economic Statistics Division, U.S. Bureau of the Census, Washington DC 20233-3300. This paper reports the general results of research undertaken by Census Bureau staff. The views expressed are attributable to the author and do not necessarily reflect those of the Census Bureau. The author wishes to thank William Butz, Sherry Courtland, Enrique Lamas, Charles Nelson, Arthur Norton, Kenneth Riccini, Paula Schneider, and Preston Waite for their helpful comments and suggestions.

2. The Census Bureau form of TQM is called Census Quality Management, or CQM.

of TQM principles. This paper reports on the outcome of that approach and draws some general lessons from the experience.

The Census Bureau is responsible for all aspects of the Survey of Income and Program Participation (SIPP). The SIPP is a unique demographic survey for the Census Bureau, as it is the only demographic survey (besides the Decennial Census long form) with no external sponsor. The Census Bureau must itself act as the survey sponsor, as a surrogate for all data users. As the producer of the Nation's official income and poverty statistics, this is a natural role, though.

The SIPP was begun in late 1983 after a joint large-scale Census Bureau-Social Security Administration-Department of Health and Human Services (Office of the Assistant Secretary of Planning and Evaluation) research effort that lasted from 1975 to 1981. After being totally discontinued in 1981 because of competing priorities within the Social Security Administration, the SIPP was revived in October 1982 and placed at the Census Bureau with a mandate to begin field operations within a year.

After a decade of data collection and analysis (1983-1992) following seven years of research, experimentation, and field testing (1975-1981), the Census Bureau decided in 1992 to undertake a thorough review of the accomplishments and the failures of the survey to date and to use that review to redesign the structure of the survey to make it more useful to its data users. The difficulties in carrying out that redesign led to the establishment of an alternate managerial approach.

II. MANAGEMENT STRUCTURE

The Census Bureau established a SIPP Executive Committee (SEC) to act internally as the survey sponsor. The SEC consists of the key division chiefs within the Census Bureau concerned with SIPP and is chaired by the Associate Director for Demographic Programs. This committee is intended to provide overall direction for the survey and has met once every two or three months.[3] The day-to-day operations of the survey are carried out at the branch level (see below).

The Census Bureau is organized into seven Directorates (Administrative, Decennial, Demographic, Economic, Field, Information Technology, and Standards) each consisting of Divisions; Divisions are composed of branches and related branches are supervised by Assistant Division Chiefs (ADCs). The Demographic Programs area of the Census Bureau is organized functionally. It consists of (1) the Demographic Statistical Methods Division (DSMD), whose responsibilities include sample design and selection, statistical methodology, and statistical review of publications; (2) the Demographic Surveys Division (DSD), whose responsibilities include overall survey management, including questionnaire design, liaison with field operations, processing and editing of raw data, and production of internal and external microdata products; and (3) the Housing and Household Economic Statistics (HHES) and (4) Population (POP) Divisions, both "subject matter" divisions whose responsibilities include content

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3. Beginning in February 1993, it meets every month.

determination, specification of edits and imputations, data quality review and approval, and production of analytical reports.[4] The SEC includes the Associate Director, the chiefs of these four divisions, and the chiefs of the Field Division and the Center for Survey Methods Research. Decisions are usually arrived at through consensus building, but occasionally votes are taken to resolve issues over which there is substantial disagreement.

Other committees have been set up to coordinate decision-making and undertake specific projects, under the overall direction of a SIPP Operations Committee (the key Assistant Division Chiefs and branch chiefs with operational responsibilities for SIPP). These other internal committees are Data Products, Processing, Research and Evaluation, and External Affairs, and include employees at the ADC, branch chief, and lower levels. This structure is illustrated in Figure 1.

In addition to the Census Bureau's SIPP External Affairs Committee, several mechanisms have been established to insure appropriate input to decision-making for the survey. The key formal mechanism for external input has been a committee organized by the Office of Management and Budget's (OMB) Office of Statistical Policy (OSP) to coordinate the input of other federal agencies into SIPP decision-making. Other mechanisms have evolved to provide advice to the Census Bureau from other groups

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4. In addition, within the Demographic Programs Directorate, there are two divisions dealing with international issues, neither involved with SIPP.

of users. These include an Association of Public Data Users committee, a working group of the American Statistical Association's Survey Research and Methodology section, and an ad hoc D.C. Area Users Group. Past mechanisms have included a committee of academics set up by the Social Science Research Council and two technical panels of the National Academy of Science's Committee on National Statistics (CNStat). Most of these external groups have been funded by the Census Bureau.

This overall management structure has been criticized by a recent CNStat panel on the future of SIPP as ill-serving the needs of the data user (National Research Council, 1993). They recommended establishment of a "principal investigator" type of approach, where "a senior person with relevant substantive background and survey experience" (p. 231) is chosen to direct the survey, assisted by teams assembled from members of the existing functional divisions. They argued that the additional functions of content, analysis, and user services beyond the normal Census Bureau task of survey operations "necessitate strengthening and focusing the management of the program" (p. 232). The senior management of the Census Bureau is currently considering the CNStat proposal.

IV. DESCRIPTION OF THE SIPP

The SIPP is a longitudinal panel survey, designed to interview a random sample of the Nation's households eight times at four-month intervals. All adult members of the initial sample

households are followed, even if they leave the original household. A serious attempt is made to follow movers as well. (See U.S. Bureau of the Census, 1991, for more details.) A new panel is introduced every year.

The SIPP has been plagued by two major problems in its first decade. Originally designed as a overlapping survey, with a new panel of 20,000 households begun each year, the survey ran into budget problems almost immediately. The very first (1984) panel was cut by roughly 3,700 eligible households in mid-1985, from its initial panel size of 20,897 eligible households. Because of these budget problems, every subsequent panel during the 1980s was smaller than the original design, and some were truncated to fewer than eight waves as well.[5]

These small sample sizes were hampering attempts by users to fully utilize the survey data. In order to provide a short-term solution, the Census Bureau decided in mid-1989 to make a radical move to obtain the funds to restore the 1990 panel to its full size. It truncated the 1988 panel after six waves (of a planned eight) and the 1989 panel after three waves. This permitted it to field a 1990 panel of 23,627 households, which included a special subsample of 3,681 households with Black, Hispanic, and female householders (with no spouse present and living with relatives) drawn from the 1989 panel. At the same time, a longer-term strategy was approved by the Administration and the

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5. The initial eligible sample sizes for the 1985-1989 panels were 14,306, 12,425, 12,527, 12,725, and 12,867 households, respectively.

Congress; this involved restoring the base level funding for the SIPP program.[6]

A second major problem hampering full use of the SIPP data was the inability of the Census Bureau to produce microdata products from the survey quickly. Initial cross-section products from the 1984 panel were produced quickly, but as the flow of data from the field continued, the processing fell further and further behind. In addition, the fast initiation of the survey prevented the Census Bureau from developing mechanisms for creating two important microdata products: a file combining cross-section data from more than one panel (since up to three panels are in the field at one time, the sample size for a given analysis can be enhanced tremendously by pooling data across panels) and a file designed to be truly longitudinal rather than a collection of hastily edited cross-section observations. (A fuller description of these problems, and suggested solutions, can be found in National Research Council, 1993.)

While it was clear that these problems were being addressed in some fashion by the Census Bureau staff (e.g. cross-section core data products from the 1990 and 1991 panels are being issued within eight or nine months after the end of data collection), there was a realization that the entire survey would benefit from a thorough reexamination of its purposes, content, and structure.

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6. Reflecting the earlier shortfall in funding, the 1991 panel was but 15,626 households. The 1992 and 1993 panels, however, began with 21,577 and 21,823 eligible households, respectively.

V. REDESIGN ACTIVITIES

Persistent complaints that the data products from the survey were not meeting the needs of the Census Bureau's customers led the SIPP Executive Committee to establish a TQM team of Bureau employees to discover and prioritize its customers' needs. This team was established in November 1991, under the leadership of the special assistant for SIPP in HHES (the Census Bureau's main user contact person). While not directly focused on obtaining the input of users for redesign decisions, the team undertook a full-scale survey of user (and potential user) needs, and informal interaction with respondents led to valuable input.

Meanwhile, based on a concern that the infrequent meeting schedule of the SEC and the typically broad-brush focus of its meetings would preclude the timely and informed decision-making necessary to keep the assessment and subsequent redesign of the SIPP structure on schedule for a 1995 implementation, the Executive Committee adopted a subcommittee structure. The SIPP Management Redesign Team (SMRT) was established in February 1992 to make the necessary decisions and develop recommendations for the larger Executive Committee to review (see Figure 2). SMRT consisted of the divisions chiefs of DSD, DSMD, HHES, and POP, and typically met weekly. Individuals from outside the team were invited to make presentations on relevant topics. Minutes were kept by the members on a rotating basis. Sensitive issues were debated freely within the team, but disagreements were not reported to those outside the team.

The goals of the SMRT were to provide guidance, review progress, coordinate research, and make decisions on difficult redesign issues. The major parts of the redesign process the SMRT dealt with were survey design, questionnaire content, cognitive research, transition to a Computer-Assisted Personal Interviewing (CAPI) mode of data collection, and development of a new processing system. This paper deals only with the survey design decision.

There was clear potential for conflict inherent in the SMRT structure. As noted by Katzenbach and Smith (1993),

> The complexities of long-term challenges, heavy demands on executive time, and ingrained individualism of senior people conspire against teams at the top. [p. 3]

Division chiefs at the Census Bureau, as senior managers of complex activities,[7] have a well-developed sense of self-worth and typically have little problem making decisions. When two such individuals meet, much less four, it is possible that personality or organizational conflict might arise, even in the absence of substantive disagreement.

Two mechanisms were developed that allowed the group to function smoothly in the face of such potential conflict. All four chiefs committed to attending the weekly meetings in person, sending a representative only when absolutely unavoidable. All four also committed to full discussion of every issue, allowing a decision to be made by majority rule (i.e. three-to-one) only when full consensus could not be reached after extensive discus-

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7. All four are members of the Senior Executive Service.

sion. Underlying these rules, though, was the extensive interaction and cooperation that had taken place among these individuals on SIPP and other surveys prior to this task-oriented activity, and the realization that further interaction would be inevitable on other activities in the future. It was clearly in no one's interest to antagonize the other team members.

Another potential source of conflict was that certain members of the SIPP Executive Committee were not part of the SMRT and might have felt that their views would therefore be accorded insufficient weight. This problem was ameliorated (but probably not eliminated) by frequent briefing of the Associate Director and regular consultation with the other division chiefs.

VII. TEAM ACTIVITIES

The first activity was to establish goals for the overall redesign effort. Four goals (in priority order) were proposed by the SMRT to the SIPP Executive Committee: (1) Use SIPP data longitudinally to understand better socioeconomic and demographic change, particularly of vulnerable subpopulations; (2) Use SIPP data to improve the official income and poverty estimates (which will continue to come from the March Current Population Survey--the CPS[8]); (3) Continue to produce occasional reports on aspects of well-being and the sociodemographic circumstances of the population; and (4) Use SIPP data to produce periodic reports

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8. The CPS is a household survey of roughly 60,000 households and is done monthly to gather the Nation's official unemployment statistics.

describing the effects of the tax and transfer system on income and poverty.

Substantial discussion ensued, based particularly on the Associate Director's concern about whether these new goals were consistent with the original intent of SIPP as established when the program was reinstated in 1982. Eventually, it was agreed to restate the original goal, and amplify the implications (particularly to strengthen the emphasis on longitudinal data) so that the goals could provide guidance for the redesign effort. A memorandum entitled "SIPP Redesign General Guidance" was issued on May 8, 1992 and sent to all relevant committees; the body of this memo is reproduced in Figure 3.

To develop input for the decision process, the SMRT chartered an Alternative Designs Group (ADG) consisting of key individuals (typically branch chief level) to gather relevant information on design alternatives from a wide variety of users, develop a full array of potential designs, determine the advantages and disadvantages of each potential design, and recommend one or two designs for the SMRT to consider. Additional input was expected from a panel commissioned by the Census Bureau and formed by the CNStat to evaluate the SIPP, but their confidentiality rules prevented the ADG from incorporating their recommendations in their process (the panel did share the general outlines of their proposed design).

The primary goals of SIPP, as stated in the past, are
(1) Improving income data, and
(2) Providing information on actual and potential program participation and its concomitants.

To provide direction for redesign decisions, we are listing guidelines below that are consistent with these overall goals. These guidelines reflect current thinking about the future of SIPP. Priorities evolve, however, and new directions and therefore new guidelines may emerge in the future. Consequently, redesign decisions must be flexible enough to adapt to new circumstances.

We offer the following guidance for the redesign effort:

- For decisions concerning design, content, processing, analysis, and dissemination, longitudinal uses of SIPP data are to take precedence over cross-section uses.
- It is important that users be able to measure short-term changes in income and program participation.
- Consistent with the decision to oversample the poor in the 1995-2004 cycle of SIPP, it is appropriate to give priority to activities that focus on improving data quality for that population.
- We favor the use of resources to develop SIPP products that will improve the Nation's official income and poverty statistics and provide a better description of the Nation's tax and transfer system and its effects on income, poverty, and well-being.

Figure 3. SMRT Memorandum on Goals

After the goals were established and the ADG was formed and set to work, a process was established to enable the SMRT to reach its decision expeditiously. The key inputs to its decision were to be the reports of the ADG and the CNStat panel. Once the SMRT recommendation was formulated, it was then to be presented to the SIPP Executive Committee for modification or ratification. The Executive Staff of the Census Bureau and the relevant staff of the Department of Commerce's Economic and Statistics Administration were then to be briefed, followed by a briefing of the

Chief Statistician at OMB (head of OSP). Members of the SIPP Interagency Committee and the chair of the CNSTAT panel would then be briefed, followed by a general announcement and implementation of the decision.

The CNStat report was behind schedule, so the SMRT requested an informal briefing on the redesign recommendations. The SMRT, the Associate Director, and the ADG team leader (the HHES special assistant for SIPP who also functioned as the Census Bureau's liaison with the CNStat panel) were briefed on the panel's preliminary recommendations in early July 1992 by the study director and committee chair. The recommendations of the ADG were transmitted to the SMRT in late July; these did not take particular note of the final CNStat recommendations, as they remained confidential until just prior to internal release of the SMRT recommendations in September.

VII. THE DECISION

The current SIPP design involves a 32-month longitudinal panel survey interviewing roughly 20,000 households every four months, with a new panel beginning every 12 months. The CNStat committee recommended that the Census Bureau adopt a design that involves a 48-month panel length, four-month recall (interviewing once every four months), with a new panel beginning every two years (two-year overlap), along with a research program to investigate the effects of a six-month recall period. The internal committee (ADG) had a similar recommendation--a 52-month

panel with four-month recall (in order to collect a full four calendar years of data), two-year overlap, research on six-month recall, plus the addition of a follow-on panel selected from the original 52-month panel to be interviewed annually for up to 10 years total.

These two reports were discussed at length by the SMRT. The key question that the team focused on was the relative importance of cross-section and longitudinal estimates to users, particularly income and poverty estimates, but also program participation estimates. CNStat had recommended that the official income and poverty estimates come from the SIPP rather than the CPS, and urged the Census Bureau to move in that direction. One direct implication of such a recommendation is that frequent introduction of new panels is necessary to minimize bias in year-to-year comparisons of cross-section estimates. Indeed, the CPS (the current source of official income and poverty statistics) introduces new samples every month. This goal (SIPP as the source of official income statistics) directly conflicts with the desire of many other users (particularly many federal agency users) to enhance the sample available for longitudinal data analysis and also is inconsistent with the CNStat panel's recommendation to start a panel every other year. Further, the Census Bureau is extremely reluctant to undertake a unilateral move to a new

survey for such a policy-relevant and sensitive economic indicator.[9]

After extensive and intensive discussion, the SIPP Executive Committee has decided to adopt the SMRT's recommendations to use the following design for SIPP in the 1990s:

- a 48-51 month panel with data collected for four full calendar years (the methodology to do so is under development);
- four-month recall; and
- a new panel beginning every four years.

These decisions allow the Census Bureau to field a SIPP of roughly 50,000 households. (See Weinberg and Petroni, 1992, for additional details.)

In most cases, the SMRT concurred with the CNStat panel and the ADG. However, the SMRT determined and the SIPP Executive Committee agreed that the best design involves a new panel begun every four years, rather than the recommended two-year overlap, along with a substantial investment in reducing attrition bias, through both field-based (if affordable) and statistical techniques. The decision to use non-overlapping panels has other benefits--field workloads are more even as a new panel is not begun until after the previous one is complete, samples are larger, and only one processing system needs to be designed. It

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9. The Census Bureau, at Congress' direction and with funding from the Bureau of Labor Statistics and the Administration for Children and Families (Department of Health and Human Services), has established a new CNStat panel to consider the issue of the appropriate data source for such statistics, among other issues. The report of the Panel on Poverty and Family Assistance is expected in Fall 1994.

is true, however, that there will be a discontinuity of some sort between year 4 of one panel and year 1 of the next, making it difficult to use SIPP as the source of official income and poverty statistics without further changes. Interestingly, satisfying all the constraints that had to be juggled in designing the transition to the new design turned out to be very difficult and the SMRT spent at least half as much time deciding on the transition strategy as it had on the redesign approach itself.

The final task of the SMRT in regard to the decision was to brief the key non-Census Bureau individuals with large stakes in the decision. Members of the SMRT briefed the key Federal agencies involved, OSP, the OMB SIPP Interagency Panel, Congressional staff, and Department of Commerce officials, occasionally accompanied by the Associate Director. Further presentations were made to outside user groups; the full SMRT and the Associate Director briefed the CNStat Panel chairman and its study director.[10]

VII. ORGANIZATIONAL LESSONS

This paper has described a situation where a complex decision task was delegated to a subcommittee of committed, involved, decision-makers. Three lessons are apparent for others adopting a team approach to complex decision-making.

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10. A formal response to all the recommendations of the Panel was provided to them in April 1993.

1. Key to internal success of the team was the conscious adoption of a team perspective--individual participant desires, while articulated within the team, were subordinated to the need for developing a viable consensus position that each member and the organization as a whole could support.

2. Key to internal agreement with the team's recommendations within the larger executive committee and the organization as a whole was consensus building outside the team, through provision of full opportunity for involved employees to provide input prior to the final decision, and the team's willingness to accord that input major weight in the eventual decision. The team is now looked to by employees as a key mechanism providing quick feedback and decisions on pressing survey issues. As noted by Katzenbach and Smith (1993, p.5), "Teams, in fact, are the best way to integrate across structural boundaries and to both design and energize core processes."

3. Key to external agreement were the extensive attempts to incorporate external input from affected agencies and individuals and full briefing of them on the reasons for and consequences of the decision. Nevertheless, some outside the agency do disagree with the Census Bureau's decision to emphasize the survey's ability to obtain longitudinal estimates rather than cross-section estimates.

While this case study took place in a government agency, the lessons drawn are more general. Team building and a broad customer focus (considering both internal and external custom-

ers), the principles behind Total Quality Management, can work to speed decisions. Its success depends, though, on a cadre of team members committed to cooperation rather than competition.[11]

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11. One further illustration of the strength of the team approach is the continued successful operation of the team even after the transfer and replacement of one of its original members.

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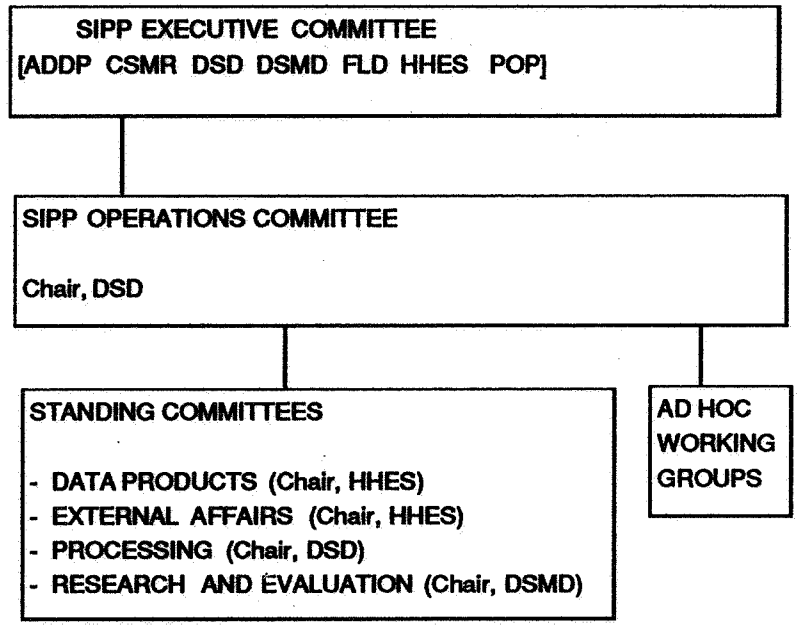

KEY

ADDP: Associate Director for Demographic Programs
CSMR: Center for Survey Methods Research
DSD: Demographic Surveys Division
DSMD: Demographic Statistical Methods Division
FLD: Field Division
HHES: Housing and Household Economic Statistics Division
POP: Population Division

FIGURE 1
SIPP
Organizational
Structure

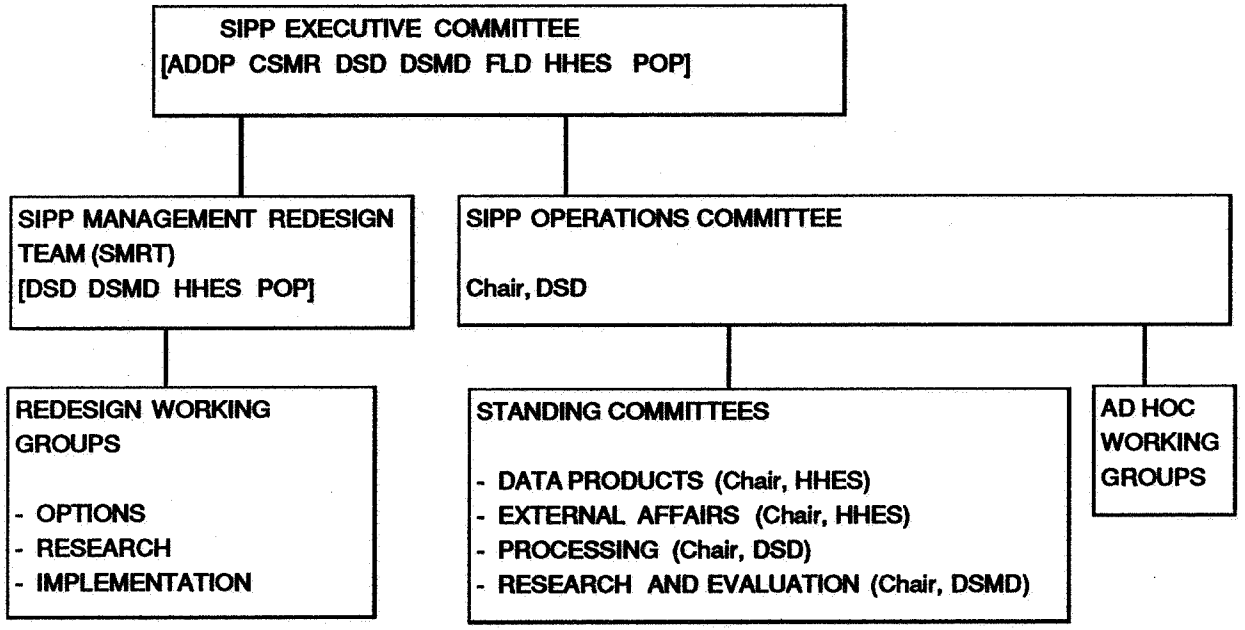

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FIGURE 2
Revised SIPP Organizational Structure