Economic Classification Policy Committee

Summary of Public Comments to ECPC Issues Papers Nos. 1 and 2

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Introduction

Economic Classification Policy Committee (ECPC) Issues Paper No. 1, "Conceptual Issues," and Issues Paper No. 2, "Aggregation Structures and Hierarchies," were published in the Federal Register on March 31, 1993, Vol. 58, No. 60, pp. 16990-17004. Comments were solicited from the public on each of the issues discussed in these two papers. This report presents a summary of the comments that the ECPC received.

In past revisions of the Standard Industrial Classification (SIC), the underlying conceptual framework and assumptions for economic classification systems were neither questioned nor examined in depth. However, the Office of Management and Budget (OMB) has charged the ECPC to undertake a "fresh slate" examination of economic classification systems. The ECPC issues papers present for public review the range of issues that the ECPC must consider when evaluating alternative classification structures.

The comments that the ECPC received on ECPC Issues Papers Nos. 1 and 2 display a wide range of views, and revealed deep understanding and sophistication with respect to the issues and concepts presented. However, most respondents restricted their comments to those topics of interest or relevance to their own organizations.

This report first presents, in Parts I and II, a summary compilation of responses to specific sections of ECPC Issues Papers Nos. 1 and 2. Part III of the report expands on items that were discussed at some length by respondents, but were not topics for which comments were specifically requested.

1. ECPC Issues Paper No. 1, "Conceptual Issues"

At the 1991 International Conference on the Classification of Economic Activities at Williamsburg, Virginia,1 many participants stated that economic classification systems, including the SIC system, need to be based on economic concepts or need an improved conceptual foundation. This call for a conceptual foundation is a major departure from previous discussions of economic classification systems.

ECPC Issues Paper No. 1 presents the differing views on implementing a conceptual basis to economic classification and invites public comments on these issues.

1.1 The Purpose of an Economic Classification System

ECPC Issues Paper No. 1 cites four purposes for an economic classification system: (a) to facilitate use of the data, (b) to reflect the structure of the economy, (c) to use in sampling, and (d) to provide for comparability. The ECPC believes that data use provides the primary rationale for an economic classification system. The ECPC solicited the views of others.

The majority responded, whether stated explicitly or by how they use economic statistics, that the prime purpose of a classification system should be to facilitate the use of the data. For example, "The need for meaningful economic data produced using economic classification systems are many and varied. . . . They include all the benefits of having accurate statistical information concerning industry manufacture and sales, comparing domestic data with international data, analyzing trends in the industry, comparing industry sales data of competing advertising industry data. . . ."\(^2\)

Others agreed that facilitating data use is the primary purpose of a classification system, but: "The other purposes, however, run a 'close second.'"\(^3\) Many expressed the need for a classification system to reflect the structure of the economy, especially the ability to accommodate past and on-going changes in the economic structure. For example, "I believe the next decade will see an acceleration in the restructuring of the U.S. economy, a restructuring which will reward the development of a fluid classification system. . . ."\(^4\) "The system should facilitate sampling. In order to do that, it must be possible to aggregate classifications to form larger sampling units."\(^5\)

"[T]here should be 'home' in the SIC for every product or service, and the system must be constructed in a manner that


\(^3\)Ken Lux, Employment Division, Oregon Department of Human Resources, June 2, 1993.


promotes and facilitates compatibility and comparability with other classification schemes and associated databases."^6

One respondent disagreed with the ECPC's judgment. "I am unable to construe data use, i.e., the use of information, as a principle to define industries in accordance with the composition and structure of the U.S. economy. Item (b), Structure of the economy, and item (d), Comparability, are current purposes underlying the construction of the SIC and should continue as such."^7 [emphasis in the original]

[Note: Section 1.2 provided a discussion of concepts that provided the background for subsequent sections, and did not contain a request for comment.]

1.3 What Grouped or Classified Data Do Users Need?

Data classification systems affect the programs of nearly all statistical agencies. Simultaneously, those same statistical programs must be structured to support users' current needs for data. Not surprisingly, statistical agencies sometimes find it difficult to stay abreast of evolving uses of statistics, because data needs change, and change quite rapidly.

ECPC Request for Comment: "The ECPC invites comments from users on the uses they make of classified data. Particularly relevant to the ECPC's deliberations is information on problems with existing (SIC) classified data in serving user needs, especially analyses that are inhibited by inadequacies in existing classifications."

As the ECPC issues papers noted and the public comments confirmed, many companies and associations use the data for market and product research. They use data both to view the current levels of output and demands as well as to forecast sales and number of customers. "They [business marketers] use the data extensively for business to business analysis. On a strategic level, businesses need supply-side data for market size and demand-side data for new product and service analysis."^8

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^8James Myers, Professor of Marketing, Claremont Graduate School, in remarks made as a discussant for the American Marketing Association at a meeting of the Census Advisory
State agencies use the data to plot employment trends among industries; they frequently use economic data to project state income, outputs, and revenues. "The State of Florida uses these data to forecast revenues for the operation of state services." They also use the data to forecast occupational and training demands for the area labor force. "Additionally, we provide economic and demographic data and analysis to the public and other governmental agencies that go well beyond the scope of the Federal/state statistical programs."10

Labor unions make extensive use of comparable wage rates for contract negotiations. They reference SIC codes to classify jobs or segment the firms. "We often use BLS earnings and employment data by industry (SIC) in Congressional testimony, negotiations, organizing, and other related activities. We frequently make comparisons in wages, benefits, and employment trends between IAM plants and BLS national and SMSA data, by industry."11

Dale Mortensen commented that economists have numerous uses for SIC data, but different categories of economists use the data differently. Macroeconomists use aggregated data quite extensively. But microeconomists are the major users. They have the viewpoint that more data are preferable, both demand- and supply-based data.12

As a general statement, the ECPC's call for information about user needs for classified data brought fewer responses than for some other sections of ECPC Issues Paper No. 1. At least one respondent felt that the ECPC should specify the users and their uses. "[W]hile there has been some discussion about the purposes and users of economic classification systems, there has been little discussion of who such systems are intended to serve, and thus no articulation of the principles that will guide the

Committees, Bureau of the Census, April 15, 1993.


12Dale Mortensen, Department of Economics, Northwestern University, in remarks made as a discussant for the American Economic Association at a meeting of the Census Advisory Committee, Bureau of the Census, April 15, 1993.
determination as to which system components need to be present in order for a new system to satisfy its primary customers."\textsuperscript{13}

1.4 Should Classification Systems Conform to a Consistent Conceptual Framework?

Some critics of the present system believe that economic classification systems need to be based on economic concepts. Conversely, others believe that the classification system must provide multipurpose statistical groupings and that there can be no single underlying concept. A major part of the disagreement between those who advocate the current approach and those who advocate a conceptual basis arises out of differing assessments of the usefulness of the present SIC system. Many see the present system as useful, though not perfect, and these individuals see criticisms of it as misunderstandings of the system's objectives. Those who advocate conceptual development emphasize the present SIC's objectives are not clearly stated and that users have expressed problems with the present system.

\textbf{ECPC Request for Comment: } The ECPC invites comments on the issue of adopting a consistent conceptual framework for the economic classification system. Relevant to the ECPC's work are assessments from data users about the usefulness of the present SIC system as well as indications of problems with it.

Support for a consistent conceptual framework is very strong among some respondents. "We believe it [a consistent conceptual framework] will increase usage of the data as there will be a better understanding of the purpose of the SIC data. Without a consistent definition of concept, the system may not be truly understood by users, and misapplied."\textsuperscript{14}

Among supporters of a conceptual framework, the pragmatists favor gradualism. "Developing a classification system on a single conceptual framework is an attractive theoretical concept. In practice, however, compromises will always be needed."\textsuperscript{15} There are also apprehensions over how practical this theoretical concept would prove to be. "As the discussion continues, we trust the Committee will seek to strike a balance between what is \textit{theoretically possible}, in terms of developing a coding system,

\textsuperscript{13}Tom Gallagher, Manager, Research and Planning, Wyoming Department of Employment, May 11, 1993.

\textsuperscript{14}Kristin A. Kuehl, Packaging Machinery Manufacturers Institute, May 23, 1993.

and what is realistically practical and obtainable in terms of budgetary constraints, both initially and from a maintenance point of view."

Some respondents feel that a mixing of demand- and supply-based industries might be preferable to a single concept throughout the system. "The mixing of concepts in different parts of the classification system is desirable because such a system recognizes the differences in industrial production processes as well as marketing arrangements among industries."

Others are apprehensive about the costs. "Changes in the coding structure could be costly and may affect current state legislative bills." "A new system would require extensive training for staff, a redesign of survey forms, a long period of employer and user adjustment. ..." "Allowing only nine months from final decisions to implementation of a new system will create difficulties for a corporation as large and as diverse as ours."

Some respondents think the emphasis on a consistent conceptual framework is misplaced. "The conceptual framework which forms the basis of the current SIC is more to group large homogenous economic units together than to support either supply-side or demand-side conceptual orientations. This framework should remain. ..."

The prospect of losing consistency or experiencing major breaks in time series concerns many respondents, because time series data are extremely important to their work. "Probably the most

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16 Ken Lux, Employment Division, Oregon Department of Human Resources, June 2, 1993.


18 Phillip A. Baker, Administrator, Nebraska Department of Labor, June 8, 1993.

19 Shirley Goetz, Director, Labor Market and Demographic Research, New Jersey Department of Labor, May 28, 1993.


important criteria for a classification system is the comparability for time-series analysis."\(^{22}\)

[Note: The ECPC subsequently prepared and released ECPC Issues Paper No. 5, "Times Series Continuity," which discusses the tradeoffs between time series continuity and keeping the classification system up-to-date.]

1.5 If a Conceptually-Based Approach Is Chosen, Which Specific Classification Approach or Approaches Should Be Adopted?

Proponents of adopting a consistent conceptual framework for economic classifications have focused on two alternative general approaches, which may be referred to as the supply-based approach and the demand-based approach. A supply-based, or production-oriented, concept aggregates commodities according to similarity in the production processes that are used to make them. In contrast, a demand-based, or commodity-oriented, classification concept yields a classification system based on commodities or services that serve similar purposes or that are used together.

ECPC Request for Comments: The ECPC invited comments on whether to implement a supply-based or demand-based approach. Comments were also invited on the importance of providing alternative classification systems and the problems that might arise if alternative systems were adopted.

Of those respondents who support a conceptually-based approach, some prefer a supply-based approach and others a demand-based approach. Associations representing products that meet similar needs favor the demand-based approach. "[W]e believe commodity-oriented classification concepts are more appropriate so that products which perform similar purposes, products which are used together, and products which are functionally related will be grouped together."\(^{23}\)

Others favor a production-based approach, at least for their industries. "[S]ince truck trailers can be grouped together as commodities having similar production processes or functions... [W]e strongly support the continuation of a production-based system for truck trailers manufacturers."\(^{24}\)

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agencies lean to a supply-based approach as more conducive to their needs.

Some recommend dual systems that report the data both ways. "While commodity and product information is available through other sources, the basis for these other sources may not be entirely consistent with the basis for the SIC. I believe the consistency provided by gathering both the demand and supply data at once would enhance the accuracy of relevant analyses and prove quite useful."\(^2\)

Again, some respondents are apprehensive that the disruptions from changing to a single concept might overwhelm any long-term benefit. "Theorists like consistency. Consistency, however, leads to rigidity. Adherence to a single, rigid concept will not adequately capture the true economic relevance of all data."\(^2\)

1.5 The Classification Unit

The establishment has been the classification unit for the SIC system since its beginning. An establishment is defined as a production entity in a single location. Concern has been expressed that U.S. business operations have become less establishment-based, implying that the classification unit be changed to the division, department, or subsidiary (DDS) level. The appropriate unit would be determined by the management structure within each firm to reflect its way of doing business.

ECPC Request for Comment: Comments were solicited on the appropriate classification unit for industrial data. Information was also sought on the extent to which inputs are shared across physical locations, whether the establishment remains a meaningful concept, and on instances where the existing establishment concept is inappropriately applied.

With respect to the classification unit, some associations lean toward moving to the DDS level of business operations. State agencies favor keeping the establishment as the classification unit. The dichotomy between state agencies and other respondents is quite pronounced.

Associations did note that although they prefer DDS, a large majority of their members operate from a single establishment.


Few specifics were provided on how to assign the proper industry to a firm with a diverse set of operations. The question arose as to how to attain consistency among classification units. Others noted the extensive volatility that exists within corporate divisions. "Divisions as units are always in flux." Justifications for the DDS center around the trend toward centralized management and accounting that make breakout of the data difficult. "Most real estate firms are single-office operations, . . . but for larger players in our business, the method of production is virtually the same across locations of a single firm, yet the record keeping will largely be done at the headquarters facility, with relatively little attribution of costs back to the individual office."3

For analysis at the state level, the adoption of a DDS could and frequently would extend a classification unit’s operations beyond political boundaries. The state agencies’ needs for geographical data at the county and state level lead them to oppose a classification unit that would include economic activities that take place outside those jurisdictions. "[C]lassification codes should continue to be assigned at the establishment level to provide the most specific geographic and industrial level of detail." Other respondents generally did not address the need for geographic detail.

2. ECPC Issues Paper No. 2, "Aggregation Structures and Hierarchies"

The present U.S. Standard Industrial Classification (SIC) system is hierarchical in that each level of the system provides an aggregation of detail at the next lower level. The SIC system arrays the economy into 11 divisions, that are divided into 83 2-digit major groups, that are further subdivided into 416 3-digit industry groups, and finally disaggregated into 1,005 4-digit industries.

2.1 Classification Hierarchies

ECPC Request for Comment: Comments were invited on the role that should be accorded to a hierarchy in classifications scheme(s) of the future; whether the hierarchy is important for the analytical


29Shirley A. Goetz, Director, Labor Market and Demographic Research, New Jersey Department of Labor, May 28, 1993.
uses of classified data; and whether a "top-down" or "bottom-up" approach is most appropriate. Examples were sought to help establish whether hierarchies have conceptual importance, or if they should be considered primarily as pragmatic methods for the presentation of data when detailed estimates do not exist.

Respondents seem comfortable with the present division and major group (2-digit) classification of the SIC. Those who advocate a top-down approach do so from the desire to leave the present hierarchy in place. "The top-down approach is logical and user friendly. We do not see the logic in revamping the hierarchy system."30

Those who advocate a bottom-up approach do so more because they prefer that the ECPC's emphasis be on the 4-digit SIC level than because of any desire to alter the present division breakout. "Businesses use data at the 4-digit level almost exclusively, and the 4-digit level should be the basis for any decisions on a revision."31

2.2 Are Multiple Classification Hierarchies Needed?

ECPC Request for Comment: Comments were invited on whether multiple hierarchies--an industry hierarchy and a product hierarchy--are needed, which would correspond to the different uses of the data.

The responses to the question "Are multiple classification hierarchies needed?" reveal general support for the concept. Respondents agree that providing just one hierarchy would fail to satisfy the diverse uses of industrial data. "[A]ny classification system should meet 'users needs,' but individual needs may be so disparate that one system is not enough."32

However, a number express caution. Would the statistical agencies spread themselves too thin if multiple hierarchies were adopted without additional funding? Corporate costs could also increase. "Such a system [production-based and market-based] would essentially double the effort and costs now required to support a single system. In addition, a dual coding structure


32Gertrude R. Scott, Vice President, Steel Service Center Institute, May 28, 1993.
would add reprogramming costs since our current [internal] system is designed to support a single STC code for each product. U.S. corporations, which are already under severe competitive pressures in world markets, should not be burdened with the costs of an additional classification system.\textsuperscript{33}

2.3 Should the System Have a Flexible Aggregation Structure?

ECPC Request for Comment: One proposal that has generated considerable discussion is Flexible aggregation: Provision of a data base that can be aggregated and disaggregated at will. Comments were invited from prospective users on the subject of alternative aggregations, including flexible aggregations, and the uses for which they are necessary.

Responders showed widespread support for flexible aggregation. "Concern about hierarchies is not important if aggregation and disaggregation are flexible."\textsuperscript{34} The facility of the users with electronic crosswalks has hastened the appeal of this feature. "[M]arketers prefer to do their own aggregation."\textsuperscript{35}

The promotion of the use of microdata hit a responsive cord. "ARI recommends that the Commerce Department examine the feasibility of providing more detailed SIC information beyond the four digit level."\textsuperscript{36} While users recognize that their products or economic activities may not warrant a 4-digit SIC, they could access the relevant microdata through this feature. "Clearly the size of the tortilla market calls for a more definitive classification. [R]equest that the SIC classification for tortillas be changed to its own sub-category of SIC 2051 (Bakery Goods)."\textsuperscript{37}

Respondents seem to prefer having a flexible aggregation structure to the publication of multiple hierarchies, although

\textsuperscript{33}W. E. Narcowich, Published & Government Reports, DuPont Finance, May 24, 1993.

\textsuperscript{34}Bruce J. Parker, General Counsel, National Solid Waste Management Association, May 27, 1993.

\textsuperscript{35}James Myers, Professor of Marketing, Claremont Graduate School, in remarks made as a discussant for the American Marketing Association at a meeting of the Census Advisory Committees, Bureau of Census, April 15, 1993.

\textsuperscript{36}Arnold W. Braswell, President, Air-Conditioning & Refrigeration Institute, May 28, 1993.

\textsuperscript{37}Irwin I. Steinberg, Executive Director, Tortilla Industry Association, May 6, 1993.
they recognize the two options are not mutually exclusive. "Multiple classification hierarchies" would be very useful and would help maximize the usefulness of the data at hand, in effect creating many data sets from one data gathering effort. Offering this data in a flexible aggregation structure in an electronic medium would take this 'multiplication' of data a step further."

3. Other Comments

Respondents discussed items that were referenced in the ECPC issues papers, but were not topics for which formal comments were requested. As noted, many of these concerns will be addressed in forthcoming ECPC issues papers.

International Comparability: Many of the respondents to the ECPC’s call for public comments emphasized the importance of international comparability of industrial statistics, and especially the need for comparability of data that will be used to analyze the economies of the North American Free Trade Agreement signatories. Subsequent to the preparation of ECPC Issues Papers Nos. 1 and 2, the ECPC initiated discussions with Statistics Canada and Instituto Nacional de Estadistica, Geografia e Informatica, of Mexico. As the result of these discussions, the three countries formed a working group to develop by 1997 a North American industrial classification system. The three countries intend that the new classification system will provide the maximum possible degree of compatibility among their industrial statistics.

Wider international comparability is also desirable, but this must at present be a long-term goal that cannot be satisfied within the time frame necessary to produce a new classification system by 1997. The ECPC has initiated discussions with international organizations, and with statistical agencies of other industrialized countries. For example, a paper on the ECPC’s activities was presented and discussed at the June 1993 meeting of the Conference of European Statisticians.39 ECPC Issues Paper No. 7, "International Comparability," (forthcoming) discusses industrial classification systems that are in use internationally, as well as the issues and problems that are


presented by the need for more international comparability on industrial statistics.

International comparability was not discussed explicitly in ECPC Issues Paper Nos. 1 and 2, and no comments were requested on this topic. Nevertheless, the need for international data was emphasized by a number of respondents. "Our preference would be for a supply-based classification system that would permit comparisons in a global economy."40 "[S]tandardize globally, or at least throughout North America. Our organization now includes members throughout the U.S. and Canada and will also include, in a few years, members in Mexico."41 Respondents also emphasized the need for a concordance with the Harmonized System.42

Services: The rapid growth of services industries has prompted questions as to whether their classification and data collection have kept pace with the changes in those industries. ECPC Issues Paper No. 6, "Services Industries," (forthcoming) will discuss the issues that arise in defining industrial classification for the services industries.

Though services industries were not singled out in ECPC Issues Papers Nos. 1 and 2, the desire for improved services classifications emerged in comments on service industries. "Some businessmen believe that the export of services are not reported or are underreported in the U.S. balance of payments data, because those services are not reflected accurately in the SIC."43 The demands for expanded coverage for services were numerous; some expressed the view that previous revisions were biased toward manufacturing. "Services get ignored or mixed up as ancillary to manufacturing."44 "Much of the employment growth

40David L. Rocha, Associate Executive Director, Manufacturing Jewelers and Silversmiths of America, May 3, 1993.

41Gertrude R. Scott, Vice President, Steel Service Center Institute, May 28, 1993.

42Harmonized Commodity Description and Coding System, a system primarily for use in classifying and collecting data on international transactions. The Harmonized System will be described in ECPC Issues Paper No. 7, "International Comparability" (forthcoming).


44Audrey Freedman, Audrey Freedman & Associates, Ibid.
in business services represents the contracting out of services previously provided by company employees."\(^{45}\)

**Regulatory Oversight:** Another issue brought up by respondents concerned "nonstatistical" use of the SIC system. Some respondents voiced strong objections to subjecting an entire SIC industry to regulatory oversight regardless of the diversity of economic activities within that industry. They contend that this is a misuse of the economic classification system. One respondent urged that "ECPC/OMB as a matter of public policy: 1. Discourage the application of economic SIC codes to noneconomic issues. 2. Encourage regulatory agencies to develop appropriate 'regulatory classification codes.'"\(^{46}\)

**Need for More Frequent Revisions and Provisions for Updating the System:** Users expressed the need to incorporate technological and organizational changes more quickly into the system. They suggested that any new classification system should expedite the addition of emerging industries and technologies, especially those in the rapidly growing service sector. "The classification system should be revised and updated frequently as our economy is constantly changing. . . . Shortening the revision cycle would result in fewer changes to time series classified data, and allow emerging industries to be classified sooner."\(^{47}\) "[T]here is a need to clarify the process whereby new products and services are added to the SIC system."\(^{48}\)

Taking a similar line, others deplore a past bias against eliminating outdated classifications. "The definition of SIC 3996 [Linoleum, Asphalted-Felt-Base and Other Hard Surface Floor Coverings, not elsewhere classified] is almost entirely inaccurate and misleading. To our knowledge linoleum has not been manufactured in the United States for more than 20 years."\(^{49}\)

However, not all respondents feel the present SIC system misrepresents their current activities. "Despite the pace of technological change, those codes relevant to our industry

\(^{45}\)Martin Lefkowitz, Director of Special Projects, U.S. Chamber of Commerce


\(^{49}\)C. Eugene Moore, Director of Public Relations, Armstrong World Industries; May 25, 1993.
[computer equipment] are reasonably accurate."\(^{50}\)