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NEW DIMENSIONS IN NATIONAL ACCOUNTING WITH SPECIAL REFERENCE TO CHILE

by

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Economic development involves the satisfaction of an increasing amount and variety of human needs. Economic planning can be defined as the systematic analysis and use of tools that can be relied upon to obtain the optimum satisfaction of human needs over a given time horizon. National accounting involves the preparation of a complex system of production, distribution and capital formation tables that measure a country's aggregate performance in satisfying economic needs over a period of time, that measure the existing inequalities in satisfying the needs of society members (distribution of income), and that measure the society's preference system in satisfying present versus future needs.[1]

In the present paper, a tentative attempt is made to extend some basic notions of national accounting in order to improve the planner's ability to measure and improve economic welfare. The extensions introduced aim to define the ultimate goals of economic planning and develop the tablesrequired to quantify the planning instruments in pursuing these goals. The approach consists in linking needs with the resources required to satisfy them.

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1 For a different definition of national accounts see the one in the introduction of the new SNA: "The new SNA provides a comprehensive and detailed framework for the systematic and integrated recording of the flows and stocks of an economy", United Nations Statistical Office. A System of National Accounts St/STAT/Ser.f/2/Rev.3/ (New York: United Nations, 1968) p. 222. National accounts have been used and proved to be very useful for short-term mobilization.

Economic resources and the sectors generating them perform the functions of food production, industrial consumer goods production, time, quantity and location transformation, quality maintenance and improvement, and so forth, in satisfying the respective economic needs. After defining and explaining each set of needs and the corresponding functions, I present a table on production by functions and another on capital formation by functions to demonstrate empirically the feasibility and desirability of using these new ideas and national account concepts. Due to lack of time, it was impossible to prepare a table on distribution by functions. As more research is undertaken, it is expected that many of these ideas will be further expanded and refined.

National accounts were developed primarily to describe the structure of the economy rather than how it operates. The additional tables by functions presented here on an integrated income-employment basis simultaneously provide a description of the structure and, partly, of its mode of operation.[2]

The need for caloric intakes, for food, is a basic one. In satisfying this need, sectors perform the first food producing function. This function is performed directly by agriculture and indirectly by other sectors, as e.g., by copper in Chile, or through foreign credits (i.e. borrowing from future or foreign generations). The latter sectors can be referred to as either quasi-food-producing or quasi-agricultural ones. A specific table on the food production function could include subsistence, non-marketed production.

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[2]Even the functional tables suggested here are, but hopefully to a lesser degree, subject to data and other conceptual difficulties typical of national accounting. For a list of some of the traditional problems see Harry Schimmler, "On Flows and Stocks of Real Capital" in National Accounts in Developing Countries of Asia (Paris: Development

The second group of consumer needs is for non-food items such as clothing, shelter, appliances and so forth. This leads to the second industrial consumer goods producing function which, performed by all commodity subsectors, leads to the production of a wide variety of raw materials, intermediate products and finally industrial consumer goods. Production estimates for the first and second function, and all other ones are presented in Table 1.

Although employment is treated explicitly in Table 1, more detailed information concerning the qualifications of those available for, needed, or participating in production may be required for planning. Table 1 could be extended subdividing the labor force or employment into untrained and trained with matching income estimates.

The third group of needs has as its characteristic that these are indirect, i.e. they do not involve the physical characteristics of products and primary needs, and they are satisfied by services. These indirect needs are for a time, location, and quantity dimension of goods that will permit their use to satisfy the direct ones.[3]

The need for a specific time attached to a good gives rise to the third time transformation function which is defined as the set of actions

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Centre, OECD, 1972) pp. 111-29; and D. D. Johnston and W. Marczewski, "Some Remarks on the Estimation of Services by Kind of Activity in the National Accounts of Selected Developing Countries in Asia" also in National Accounts in Developing Countries of Asia, Ibid, pp. 311-41. For an analysis of the methodological, data availability and related estimation problems of the Chilean national accounts see Markos Mamalakis, Historical Statistics of Chile, Vol. 1, National Accounts (New Haven, Conn: Yale Economic Growth Center, 1967) pp. 1-47.

[3]The ideas concerning functions were developed over a number of years and are found in a less complete version in Markos Mamalakis, "Urbanization and Sectoral Transformation in Latin America, 1950-65." Paper presented at the 39th Congress of Latin Americanists, Lima, Peru, August 1970 (Milwaukee: University of Wisconsin-Milwaukee, Latin American Center, 1970) Center Discussion Paper 24.

Table 1

Development Functions and Income and Employment Created in Performing Them By Economic Sectors, 1969

Millions of Escudos, 1965 prices, thousands of persons, and in percentages of the total.

Sector Performing Functions		Food Production		Production of Non-food consumer goods, raw materials and intermediate products		Transformation of: Time		Location		Quantity	
		Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)	Absolute (7)	% (8)	Absolute (9)	% (10)
Agriculture	Income	1,254.0	7.43								
	Labor	699.9	25.14								
Mining	Income			2,495.0	14.79						
	Labor			97.7	3.51						
Manufacturing	Income	965.6	5.72	2,414.0	14.31						
	Labor	110.1	3.95	303.0	10.88						
Construction	Income										
	Labor										
Commerce	Income					1,000.7	5.93	796.7	4.72	962.5	5.70
	Labor					83.9	3.01	95.4	3.42	148.7	5.34
Transport	Income							770.4	4.57		
	Labor							150.4	5.40		
Gas, Water, Electricity and Sanitary Services	Income			164.3	0.97			54.7	0.32		
	Labor			8.9	0.31			2.9	0.10		
Services	Income							164.5	0.97	164.5	0.97
	Labor							35.1	1.26	35.1	1.26
TOTAL	Income	2,219.6	13.15	5,073.3	30.07	1,000.7	5.93	1,786.3	10.58	1,127.0	6.67
	Labor	810.0	29.09	409.6	14.70	83.9	3.01	283.8	10.19	183.8	6.60

Table 1 (continued)

Development Functions and Income and Employment Created in Performing Them By Economic Sectors, 1969

Millions of Escudos, 1965 prices, thousands of persons, and in percentages of the total.

Sector Performing Functions		Quality Maintenance		Quality Improvement		Transmission of Information		Money Function		Cultural and Religious enrichment Functions		Total	
		Absolute (11)	% (12)	Absolute (13)	% (14)	Absolute (15)	% (16)	Absolute (17)	% (18)	Absolute (19)	% (20)	Absolute (21)	% (22)
Agriculture	Income											1,254.0	7.43
	Labor											699.9	25.14
Mining	Income											2,495.0	14.79
	Labor											97.7	3.51
Manufacturing	Income	1,207.0	7.15	241.4	1.43							4,828.0	28.61
	Labor	115.6	4.15	22.0	0.79							550.7	19.77
Construction	Income	500.8	2.97	241.2	1.43							742.0	4.40
	Labor	120.0	4.31	52.0	1.86							172.0	6.17
Commerce	Income	318.7	1.89					108.4	0.64			3,187.0	18.88
	Labor	38.1	1.36					15.3	0.54			381.4	13.67
Transport	Income					85.6	0.51					856.0	5.08
	Labor					17.0	0.61					167.4	6.01
Gas, Water, Electricity and Sanitary Services	Income											219.0	1.29
	Labor											11.8	0.41
Services	Income	1,645.0	9.75	987.0	5.85					329.0	1.95	3,290.0	19.49
	Labor	351.1	12.61	210.6	7.56					70.2	2.52	702.1	25.21
TOTAL	Income	3,671.5	21.76	1,469.6	8.71	85.6	0.51	108.4	0.64	329.0	1.95	16,871.0	99.97
	Labor	624.8	22.43	284.6	10.21	17.0	0.61	15.3	0.54	70.2	2.52	2,783.0	99.89

SOURCE: Obtained from or calculated by using information found in Oficina de planificacion Nacional, ODEPLAN, Cuentas Nacionales de Chile 1960-1970. (Santiago, Chile: ODEPLAN, 1972) Tables 12-4,pp.45-50; and ODEPLAN, Poblacion Ocupada per Sectores Economicos, 1960-1970 (Santiago, Chile: ODEPLAN, 1971), Table 1.

Note: The term "labor" in the present table stands for employment, not labor force.

that transforms the time dimension of the stock and flow of goods and services in bridging the time gaps between production and consumption patterns. Considered as subsistence, traditional and minimum because no economic system can survive without it, this function is largely performed by the storage, trade, banking and transport sectors. Furthermore, since it is indispensable to every society, sectors performing it are always present although frequently only in embryo form as secondary activities within other sectors. Urbanization brings forth an increasing complexity in time patterns of economic flows, thus eliciting increasing sophistication in performing the function of optimum time-matching of these flows.

The need for a specific location gives rise to the fourth, the location transformation function, which is defined as the set of actions that transforms the locational dimension of goods and service flows. This function reduces or eliminates the gap created by locational distance between and within production patterns of firms and consumption need-patterns of households. Performed primarily by trade and transportation, but also by gas, water and electricity, this function assumes increasing importance as urbanization rises and as urban concentration in consumption is satisfied by a worldwide dispersed production.

The need for a specific quantity of a good or service gives rise to the fifth quantity transformation function, which is defined as the set of actions that transforms the quantity of the stocks and flows of goods and services. This function, which is performed primarily by trade, bridges the quantity gap between the demand and supply patterns of individual production and consumption units both in the input and output markets. The services performing this function are required and stimulated by expansion and specialization of production. In Chile, the idiosyncracies of the export-import flows, taxation and expenditure

patterns and the urban concentration of industry, government and other services have led to centralization of this function and trade in the cities.

The needs for maintaining quality give rise to the sixth quality maintenance function, which is defined as the set of actions that aims to maintain the quality of the human, physical, institutional, political and social capital stocks and the flow of goods and services thereof. The maintenance function, performed primarily by health, education, repair and personal services, aims to prevent and forestall the quality changes occurring due to usage or passage of time. This function assumes major importance in an urban environment where stocks and flows of goods and services are subjected to an ever increasing degree and intensity of usage. The very important human-stock-quality maintenance services performed by housewives and other house members are a well-known but unfortunate exclusion from the national accounts.

Unlike some functions which can be fulfilled exclusively by the service sector, the quality maintenance function can be performed both by the goods and services sectors. Thus, the quality of the stock of consumer durables can be maintained either through continuous replacement of those durables in need of repair- the quality maintenance function is served by the goods producing sector - or by using the service sector to maintain the quality through repair and maintenance. The magnitude of maintenance services is likely to depend, among other, on the quality of the available resources, the cost and possibility of replacing goods in need of maintenance, and the cost of using services for such maintenance. The high cost of local industrial goods needed in Chile to maintain quality and the high cost or unavailability of imported goods has led all users--consumers and producers alike--to use services rather than goods in maintaining the quality of input stocks and of services flowing thereof.

Quality maintenance is all encompassing. For example, education, public administration, health and welfare in part maintain a society's stock of human capital constant by training each generation to match preceding quality levels and by maintaining the historical life expectancy, infant mortality and so forth. They also maintain the stock of institutional and political capital by passing on to new generations of teachers, soldiers, politicians, business and clergymen the already accumulated values, attitudes, esprit de corps and Weltanschaung.

Whether quality maintenance is performed through a flow of private or public services, it almost always involves pecuniary costs but not necessarily a market price--e.g. "free" public education, health, housing and other services--leading to idiosyncratic national accounts estimates. In planning for quality maintenance, quantity, or production indeces on the number of analphabets, schools, hospitals, inoculations, arrests, illegal takeovers, democratic elections, epidemics and disease- and age-specific mortality rates provide valuable, supplementary to national accounts, information.

The interactions between national accounts and planning for quality maintenance are greatly complicated by the presence of free goods such as clean water, uncontaminated air, game, and other natural resources. Goods and services that are not scarce in an economic sense should be excluded both from national accounts and planning. Free, i.e. non-scarce, goods should not be confused, however, with those scarce goods that carry a very low or no price either because identifiable owners are lacking or for other reasons as is the case with rare birds, animals, fish, and irreproducible natural resources. Furthermore, scarcity, and thus the concept of free goods, can be relative in an inter-temporal,-regional, or-country sense. The clean water and air scarcity plaguing

Table No. 2

Capital Formation by Functions, Sectors, and Type of Machinery and Equipment, 1965.
(In millions of escudos and in percentages of total fixed capital formation).

Sector Performing Functions		Food Production		Production of Non-food consumer goods, raw materials and intermediate products		Transformation of					
						Time		Location		Quantity	
		Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)	Absolute (7)	% (8)	Absolute (9)	% (10)
Agriculture*	Gross Investment	484.0	16.92								
	Machinery and Equipment	68.0	2.38								
	National	35.0	1.22								
	Imported	33.0	1.15								
Mining	Gross Investment			185.0	6.47						
	Machinery and Equipment			165.0	5.77						
	National			9.0	0.31						
	Imported			156.0	5.46						
Manufacturing	Gross Investment	80.0	2.80	250.0	8.74						
	Machinery and Equipment	76.0	2.66	237.0	8.29						
	National	17.0	0.60	53.0	1.85						
	Imported	59.0	2.06	184.0	6.44						

Table No. 2 (continued)

Capital Formation by Functions, Sectors and Type of Machinery and Equipment, 1965.
(In millions of escudos and in percentages of total fixed capital formation).

Quality				Transmission of Information		Money Function		Cultural and Religious enrichment Functions		Total		SECTOR
Maintenance		Improvement										
Absolute (11)	% (12)	Absolute (13)	% (14)	Absolute (15)	% (16)	Absolute (17)	% (18)	Absolute (19)	% (20)	Absolute (21)	% (22)	
										484.0	16.92	Agriculture
										68.0	2.38	
										35.0	1.22	
										33.0	1.15	
										185.0	6.47	Mining
										165.0	5.77	
										9.0	0.31	
										156.0	5.46	
100.0	3.50	42.0	1.47							472.0	16.51	Manufacturing
95.0	3.32	40.0	1.40							448.0	15.67	
21.0	0.74	9.0	0.31							100.0	3.50	
74.0	2.59	31.0	1.08							348.0	12.17	

Table No. 2 (continued)

Capital Formation by Functions, Sectors and Type of Machinery and Equipment, 1965.
(In millions of escudos and in percentages of total fixed capital formation).

Sector Performing Functions		Food Production		Production of Non-food consumer goods, raw materials and intermediate products		Transformation of					
						Time		Location		Quantity	
		Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)	Absolute (7)	% (8)	Absolute (9)	% (10)
Construction	Gross Investment										
	Machinery & Equipment										
	National										
	Imported										
Ownership of Dwellings	Gross Investment										
	Machinery & Equipment										
	National										
	Imported										
Trade	Gross Investment					15.0	0.52	15.0	0.52	10.0	0.35
	Machinery & Equipment					8.0	0.28	8.0	0.28	5.0	0.17
	National					4.0	0.14	4.0	0.14	2.0	0.07
	Imported					4.0	0.14	4.0	0.14	3.0	0.10
Transport	Gross Investment							400.0	13.99		
	Machinery & Equipment							110.0	3.85		
	National							15.0	0.52		
	Imported							95.0	3.32		

Table No. 2 (continued)

Capital Formation by Functions, Sectors and Type of Machinery and Equipment, 1965.
(In millions of escudos and in percentages of total fixed capital formation).

Quality				Transmission of Information		Money Function		Cultural and Religious enrichment Functions		Total		SECTOR
Maintenance		Improvement										
Absolute (11)	% (12)	Absolute (13)	% (14)	Absolute (15)	% (16)	Absolute (17)	% (18)	Absolute (19)	% (20)	Absolute (21)	% (22)	
29.0	1.01									29.0	1.01	Construction
29.0	1.01									29.0	1.01	
22.0	0.77									22.0	0.77	
7.0	0.24									7.0	0.24	
250.0	8.74	262.0	9.16							512.0	17.90	Ownership of Dwellings
0.0	0.00	0.0	0.00							0.0	0.0	
0.0	0.00	0.0	0.00							0.0	0.0	
0.0	0.00	0.0	0.00							0.0	0.0	
10.0	0.35					16.0	0.56			66.0	2.30	Trade and Banking
5.0	0.17					9.0	0.32			35.0	1.22	
2.0	0.07					5.0	0.17			17.0	0.59	
3.0	0.10					4.0	0.14			18.0	0.62	
				58.0	2.03					458.0	16.02	Transport
				17.0	0.59					127.0	4.44	
				2.0	0.07					17.0	0.59	
				15.0	0.52					110.0	3.84	

Table No. 2 (continued)

Capital Formation by Functions, Sectors and Type of Machinery and Equipment, 1965
(In millions of escudos and in percentages of total fixed carital formation.)

Sector Performing Functions		Food Production		Production of Non-food consumer goods, raw materials and intermediate products		Time		Transformation of Location		Transformation of Quantity	
		Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)	Absolute (7)	% (8)	Absolute (9)	% (10)
Gas, Water, Electricity and Sanitary Services	Gross Investment			80.0	2.80			120.0	4.20		
	Machinery & Equipment			11.0	0.38			16.0	0.56		
	National			1.0	0.03			2.0	0.07		
	Imported			10.0	0.35			14.0	0.49		
Services	Gross Investment							20.0	0.70	25.0	0.87
	Machinery & Equipment							7.0	0.24	9.0	0.31
	National							2.0	0.07	3.0	0.10
	Imported							5.0	0.17	6.0	0.21
TOTAL	Gross Investment	564.0	19.72	515.0	18.01	15.0	0.52	555.0	19.41	35.0	1.22
	Machinery & Equipment	144.0	5.04	413.0	14.44	8.0	0.28	141.0	4.93	14.0	0.48
	National	52.0	1.82	63.0	2.19	4.0	0.14	23.0	0.80	5.0	0.17
	Imported	92.0	3.21	350.0	12.25	4.0	0.14	118.0	4.12	9.0	0.31

Table No. 2 (continued)

Capital Formation by Functions, Sectors and Type of Machinery and Equipment, 1965.
(In millions of escudos and in percentages of total fixed capital formation).

Quality				Transmission Of Information		Money Function		Cultural and Religious enrichment Functions		Total		SECTOR
Maintenance		Improvement										
Absolute (11)	% (12)	Absolute (13)	% (14)	Absolute (15)	% (16)	Absolute (17)	% (18)	Absolute (19)	% (20)	Absolute (21)	% (22)	
54.0	1.89									254.0	8.89	Gas, Water, Electricity and Sanitary Services
7.0	0.24									34.0	1.18	
0.0	0.0									3.0	0.10	
7.0	0.24									31.0	1.08	
180.0	6.30	120.0	4.20					54.0	1.89	399.0	13.96	Services
67.0	2.34	45.0	1.57					21.0	0.74	149.0	5.20	
21.0	0.73	14.0	0.49					6.0	0.21	46.0	1.60	
46.0	1.61	31.0	1.08					15.0	0.53	103.0	3.60	
623.0	21.79	424.0	14.83	58.0	2.03	16.0	0.56	54.0	1.89	2,859.0	99.98	TOTAL
203.0	7.08	85.0	2.97	17.0	0.59	9.0	0.32	21.0	0.74	1,055.0	36.87	
66.0	2.31	23.0	0.80	2.0	0.07	5.0	0.17	6.0	0.21	249.0	8.68	
137.0	4.78	62.0	2.16	15.0	0.52	4.0	0.14	15.0	0.53	806.0	28.16	

Source: Obtained or calculated by using information found in Presidencia de la República, Oficina de Planificación Sectorial, Inversion Geográfica Bruta en Capital Fijo por Sectores de Destino, Período 1962-1966, Tables 1, 2, 3, 4, 5, , 7, pp. 2-8.

Note: #Gross investment stands for gross investment in fixed capital formation.

developed nations may not be of immediate general concern to poor nations, but is present or imminent in numerous urban areas or specific regions of the developing nations. Early planning, even without assistance from national accounts, may reduce future costs of quality maintenance.[4]

Development is characterized by the rising need for better quality of inputs and outputs. These needs are satisfied by the seventh quality improvement function which is defined as the set of actions that improves the quality of the stock of physical, human, environmental, social and political capital and of the flow of services thereof. A central growth challenge is to develop the education, health, government, and personal services sectors that perform this function. The secret of the relationship between services and aggregate growth lies in the strength of the quality improvement function which determines an economy's ability to modernize and transform.[5]

The quality of life--quality of stocks and flows of goods and services--rises either because more or because better goods and services are available. Quality improvements in all capital forms are likely to be arrested if great inequalities in the distribution of benefits lead to destructive internal tension and conflict. Unless service-sector growth, industrialization and urbanization are strongly linked with the quality improvement function they may become obstacles rather than stimuli

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[4]Although it may be desirable to measure the consumer value of free game, wood, water, air and other natural resources, there exist serious difficulties. The estimates would require significant imputations, would undoubtedly raise the income estimates of some developing nations, and consequently possibly reduce foreign aid eligibility. To the extent that the availability of free goods and services differs between or within developing nations, national accounts are not an accurate measure of either welfare or inter-temporal or-regional welfare differences but can still serve planning.

[5]In a distinct framework of analysis, Henry Bruton has illustrated that the flow of educational services in Chile has increased but the quality of this flow has not improved. This phenomenon, which has hampered

to growth. Given the existing resource constraints and the competitive use of resources for quality maintenance and improvement, urbanization often claims a rising resource share to expand such quality maintenance services as water, electricity, sewage control, transport and welfare, reducing the margin available for pursuing the more critical quality improvement function. It is for this reason that urbanization can pose a threat to accelerated development.

In order to satisfy the needs for information, for instruments of transactions and storage of wealth, and the cultural-religious needs, the information transmission, the money, and the cultural and religious enrichment functions are performed. The information transmission function, performed by communications and transportation, is defined as the set of actions required to transmit information concerning economic and non-economic events in a society. The money function is defined as the complex of actions performed by the banking and financial intermediation system--trade and banking--in an exchange economy. Finally, the cultural and religious enrichment function, performed by personal services, includes all actions required to keep in balance and enrich the soul and spirit of society members. In a modern urban environment this latter function assumes an unprecedented importance as it is called upon to relieve the anxieties, tensions and desires of the soul and mind of people living outside man's original, natural, low-density habitat.

Value is being added each time any of the aforementioned needs is satisfied and anyone of these functions is performed. The value that is being added is not, however, always measured and included in the national

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growth and reduced the rate of return on education, can be easily explained, and possibly corrected, in the present quality maintaining versus quality improving (education) functional framework, but not within the tables of the traditional national accounts. For the analysis of Chilean education see Henry J. Bruton, Productividad de la Educacion en Chile. (Santiago: Universidad de Chile, Instituto de Economia y Planificación, 1968) Publication No. 103, Part II, pp. 1-40.

accounts. If national accounts are to be used as an effective measure of economic welfare changes over time and as a basis for planning, it would be necessary to include monetary estimates--actual or imputed-- of all value added in performing functions satisfying needs through scarce resources. Whenever with growth, expansion, or change, some previously satisfied needs now remain unsatisfied (or less so) falling value added estimates will take this into account.

To a planner, the goal should be satisfaction of human needs. Within certain ranges of income--presumably low ones--an increase in income may almost always imply an improved performance of the aforementioned functions. The underlying assumption is that the unmeasured value added in satisfying needs remains intact or declines less than the measured value added increases. At higher levels of income, or under certain circumstances even at low levels, such as e.g. in congested urban environments, or heavy concentration of polluting production in rivers, lakes, etc., this may not be true and the planner must know the trade-offs and costs of substitution between needs and functions and consider them explicitly in setting up his goals, instruments and tools.

The tables on production, distribution and capital formation by functions could introduce additional dimensions to serve special planning needs. The urban-rural dichotomy provides one dimension of rising significance. The unmeasured component in value added in performing each function also needs to be introduced whenever intertemporal or intercountry comparisons are made. Another extension, which affects the capital formation table by functions, would provide depreciation and replacement estimates for all forms of capital--physical, human, institutional and environmental. The production tables could also be modified to take into account the origin of goods used to satisfy the various needs.

Planning of the unincorporated rural and urban income and employment segments is facilitated by the present framework. In the rural segment, the household divides its non-leisure time between agricultural production and service activities that change the location, quantity or quality dimension of goods. The national accounts, however, measure only value added in agricultural production. Planning requires an accurate measure of the non-agricultural income generated within the rural sector in order to make valid recommendations concerning investment, employment, price policies and so forth.

The urban unincorporated segment dually engages in industrial commodity and service production. Much of the service output, which is an input to unincorporated industry, escapes measurement and inclusion in the national accounts. Urban as well as national planning requires identification and measurement of the distinct functions performed by this urban unincorporated segment, which in Chile has changed cyclically. A table of the availability of resources to perform different functions cannot be prepared without this information.

The presently recommended changes of the new SNA can be condensed or rearranged, if data are lacking or special planning needs are to be satisfied. Thus, separate or combined income and employment data can be estimated for the time, location and quantity transformation functions. Value added and employment estimates in quality maintenance and quality improvement may not be presented separately very easily either, even though they are of critical importance in linking social and economic planning with the national accounts. Furthermore, estimates for the money function may have to be combined with those for time, location and quantity transformation because the available information covers only the organized money and capital markets. Also, the estimates for the cultural and religious enrichment functions can be combined with those for quality maintenance or improvement. The money,

information transmission, and cultural and religious enrichment functions may give rise to only small amounts of income and employment and for that reason be submerged or combined with other categories.

Most, if not all functions, can be performed in a subsistence, or nonmonetary, or artisan, or unincorporated, or technologically modern manufacturing or other environment but income generated is not, unfortunately, measured with equal accuracy in all instances. A shift from the industrial to the functional classification focuses on existing gaps, and can thus improve income estimates and the planning based upon them.

The framework of production, distribution, capital formation and employment by functions presents economic yardsticks of social development that are few, simple, linked to human needs and planning purposes, flexible--can accomodate special emphasis on land tenure arrangements, export orientation, subsistence, nonmarketed, unincorporated, or foreign-owned components--and interdependent. It deals explicitly with the issue of poverty through the production, distribution and capital formation in the quality maintenance as well as the other functions. And it emphasizes the notions of balance and imbalance between functions, in their degree of performance in satisfying human needs, and between production, distribution and capital formation. Within this problem-and bottle neck-oriented framework, hither to ... underemphasized qualitative dimensions of growth are explored and measured.

Economic planning goals need to be expanded beyond aggregate or per capita GDP increases to include the maintainance and improvement of aggregate quality, accelerated quality improvement for the rural and urban poor- Chile's caste of untouchables--, and a more equitable distribution of all social services. Within the present framework, the social policy goals of quality of life, better distribution and so forth are restated in terms of and meshed with the new economic goals.