



INTERNATIONAL
FOOD POLICY
RESEARCH
INSTITUTE

IFPRI Discussion Paper 01396

December 2014

Public Account and Coding System in Kenya
The Trend and Pattern of Agricultural Expenditure

Bingxin Yu

Haisen Zhang

Development Strategy and Governance Division

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

The International Food Policy Research Institute (IFPRI), established in 1975, provides evidence-based policy solutions to sustainably end hunger and malnutrition and reduce poverty. The institute conducts research, communicates results, optimizes partnerships, and builds capacity to ensure sustainable food production, promote healthy food systems, improve markets and trade, transform agriculture, build resilience, and strengthen institutions and governance. Gender is considered in all of the institute's work. IFPRI collaborates with partners around the world, including development implementers, public institutions, the private sector, and farmers' organizations, to ensure that local, national, regional, and global food policies are based on evidence. IFPRI is a member of the CGIAR Consortium.

AUTHORS

Bingxin Yu (b.yu@cgiar.org) is a research fellow in the Development Strategy and Governance Division of the International Food Policy Research Institute, Washington, DC.

Haisen Zhang (haisenzhang@hotmail.com) is the director of the Center for International Agricultural Cooperation and Development at the University of International Business and Economics, Beijing.

Notices

¹ IFPRI Discussion Papers contain preliminary material and research results and are circulated in order to stimulate discussion and critical comment. They have not been subject to a formal external review via IFPRI's Publications Review Committee. Any opinions stated herein are those of the author(s) and are not necessarily representative of or endorsed by the International Food Policy Research Institute.

² The boundaries and names shown and the designations used on the map(s) herein do not imply official endorsement or acceptance by the International Food Policy Research Institute (IFPRI) or its partners and contributors. Research Institute.

Copyright 2014 International Food Policy Research Institute. All rights reserved. Sections of this material may be reproduced for personal and not-for-profit use without the express written permission of but with acknowledgment to IFPRI. To reproduce the material contained herein for profit or commercial use requires express written permission. To obtain permission, contact the Communications Division at ifpri-copyright@cgiar.org.

Contents

Abstract	v
Acknowledgments	vi
Abbreviations and Acronyms	vii
1. Introduction and Background	1
2. Institutional Framework and Budget Process in Kenya	3
3. Kenya Data Description	5
4. Kenya Data Aggregate	11
5. Agricultural Expenditure in Kenya	26
6. Conclusion	32
Appendix: Supplementary Tables	34
References	44

Tables

3.1 Variable definitions	5
3.2 Structure of government expenditure data in Kenya	7
3.3 Administrative classification in the Ministry of Agriculture (vote 10) in 2008/2009	8
3.3 Administrative classification in the Ministry of Agriculture (vote 10) in 2008/2009	9
3.4 Economic classification in the Ministry of Agriculture	10
4.1 Central government expenditure by administrative classification, in billions of shillings	11
4.2 Changes in the structure of subvotes in agriculture, livestock, and fishery, in billions of shillings	15
4.3 Expenditures related to fishery under changed government administrative structure, in billions of shillings	16
4.4 Government expenditure by functional classification, in billions of shillings	17
4.5 Government expenditure by economic classification, in billions of shillings	21
4.6 Structure of central government expenditure by administrative and economic classifications in 2010/2011, in percentages	23
5.1 Comparison of central government expenditure by sources, in billions of shillings	26
5.2 Structure of central government agricultural expenditure, in billions of shillings	28
5.3 Agricultural expenditure by functional and economic classification in 2010/2011, in billions of shillings	31
A.1 Classification of Functions of Government classification of function related to agriculture	34
A.2 List of vote and subvote	35
A.3 Mapping between head code and COFOG functional classification in Ministry of Agriculture, Ministry of Livestock Development, and Ministry of Fisheries Development	41

Figures

4.1 Central government expenditure by administrative classification in 2010/2011, in percentage	14
4.2 Central government expenditure by functional classification in 2010/2011, in percentage	20
4.3 Central government expenditure by economic classification, in billions of shillings	21
5.1 Comparison of agricultural expenditure	27
5.2 Central government agricultural expenditure by economic classification, in billions of shillings	30

ABSTRACT

This paper is part of a set of country case studies that take a detailed look at public expenditures in agriculture and at how these expenditure data are captured in government financial and budget accounts. The objective of these studies is to unpack the *black box* of public expenditure statistics reported in various cross-country datasets and ultimately enable the use of existing government accounts to identify levels and compositions of country-level agricultural spending data, with clearer knowledge of what these data are in fact accounting for.

Public expenditure is one of the most important policy instruments to achieve the development goals in developing and transition countries, and the formulation of an effective policy relies on a clear definition of agricultural expenditure. Based on government expenditure data from 2002/2003 to 2010/2011, this paper first reviews the institutional arrangement and budgeting process in Kenya, followed by a description of the structure of public expenditure account in Kenya. The expenditure data are aggregated according to clearly delineated administrative, functional, and economic classifications, which produces the composition and trend of agricultural expenditure in the country over time. Results from aggregation suggest that agricultural expenditure goes beyond the ministry of agriculture and that the share of agriculture in total expenditure remained stagnant at 4–5 percent in the 2000s despite a steady increase in the level of total government spending. More investment in agricultural capital is needed to promote long-term growth in agricultural production and productivity.

Keywords: agriculture expenditure, Kenya, COFOG, classification

JEL: H5, O1, Q18, Q16

ACKNOWLEDGMENTS

This paper is one of a set of four Africa-based case studies on agricultural public expenditure measurement approaches. This work was undertaken as part of, and funded by, the CGIAR Research Program on Policies, Institutions, and Markets, led by the International Food Policy Research Institute. Special thanks to Joseph Karugia and Paul Guthiga in the Regional Strategic Analysis and Knowledge Support System East Africa Node, Hiram Mbatia of the Kenya National Bureau of Statistics, and Issac Munyendo of the Ministry of Agriculture for sharing data and insights and to Tewodaj Mogues, Xinshen Diao, Eduardo Magalhaes, and Edina Metili Mwangi for their comments about and assistance with this paper.

ABBREVIATIONS AND ACRONYMS

CDF	Constituency Development Fund
COFOG	Classification of Functions of Government
FAO	Food and Agriculture Organization of the United Nations
GFS	government finance statistics
GOK	government of Kenya
IFMIS	Integrated Financial Management Information System
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
LA	local authority
MOF	Ministry of Finance (renamed Ministry of National Treasury in 2013)
PFM	Public Financial Management
R&D	research and development

1. INTRODUCTION AND BACKGROUND

Public expenditure serves to translate policy goals of economic growth and poverty reduction into actual achievements through the delivery of public services. A better understanding of the linkages between public expenditure and development outcomes can provide further insight into overall poverty-reduction strategies and other key objectives of economic and human development. This is especially the case for the agricultural sector because the nature of public goods implies that the private sector tends to provide agricultural expenditure at a level lower than the social optimum (Mogues et al. 2012). The motivations for public interventions arise from economic inefficiencies caused by market failures and equity in the agricultural sector.

There is a growing recognition among policymakers and development practitioners that investment in agriculture is essential to productivity growth, income generation, poverty reduction, and food security. In addition, donors and the general public have increasingly requested expenditure accountability and transparency from governments. The government demands transparency in public spending for the purpose of tracking, monitoring, and evaluating the flows and impacts of public resource allocation. The transparency of government expenditure can provide information about how the public resources are appropriated and whether efficiency improvements in public expenditure translate into better provision of public goods.

It is difficult to make comprehensive and reliable comparisons of agricultural expenditure across countries and time, partly due to the data challenges. The major data challenges include varying definitions of the agricultural sector and different levels of disaggregation. The definition of agriculture varies tremendously, resulting in varying country classifications for agricultural expenditure.

There are many reasons behind the variations of definition. First, many countries derive agricultural spending from administrative structure, but in general agricultural expenditure goes beyond ministries of agriculture and related agencies. Ministries of land, rural development, water and others often are responsible for spending in some key agricultural services or commodities like irrigation. In addition, there are complementary expenditures in rural areas that are important for agriculture like rural infrastructure and social investment that could fall under the Ministry of Agriculture.

Second, although a large number of countries have adopted the ten functions outlined by the Classification of Functions of Government (COFOG) (International Monetary Fund [IMF] 2001), there is variable interpretation of this system. The COFOG guide describes the contents of each functional category at a high level of aggregation (Table A.1), but not all countries follow the classification completely. Furthermore, the outlays of COFOG are not associated with specific functions within the agricultural sector like research, extension, irrigation, or subsidies nor with specific objectives like productivity increase or food security. Moreover, not all countries report government spending using this classification.

Third, the accounting and reporting systems used by different countries generate varying levels of disaggregation of agricultural public expenditure data. While most data are available at a high level of aggregation of COFOG—the aggregate of “Agriculture, Forestry and Fisheries”—it is less likely for policy analysts and researchers to find agricultural spending by subsectors, current and capital spending, or functions in every country. Such high-level aggregation does not allow us to examine the allocation within agricultural expenditure, such as agricultural research and development (R&D), extension, and irrigation. In addition, there are enormous disparities in the extent of disaggregation from the national total, for example, to the subnational level, by funding sources or development goals (Benin and Yu 2013).

Faced with different reporting formats designed by the international development community, governments, and the general public, public expenditure accounting staff are having a hard time responding to all the requests within a reasonable time frame, leading to uninformed policy decisions. A well-defined coding system for expenditures can help countries to better track, monitor, and evaluate their public resource allocations by providing more detailed data along with clear documentation. A transparent

and user-friendly coding system is critical in assessing the effectiveness and efficiency of public expenditure. It also motivates the countries to put expenditure data in open access, allowing researchers and policymakers to analyze the data based on their individual needs.

Against this background, a team of researchers at the International Food Policy Research Institute (IFPRI) has undertaken the task of developing an improved methodology for measuring and reporting public expenditures in agriculture. In the long run, this activity will contribute to the establishment of an easy aggregating model and capacity building in the country through research support to the Regional Strategic Analysis and Knowledge Support System and Strategic Analysis and Knowledge Support System nodes.

Kenya was selected for a country case study to establish the mapping link between the countries' government finance statistics (GFS) systems, which record detailed public spending data, and spending categories that are defined by COFOG or individual users. The spending categories in agriculture can be defined by activities such as agricultural research, irrigation, and natural resource conservation. Users can also obtain expenditure information by COFOG economic classification like salary and wages, transfer, and capital spending. This paper analyzes the coding systems underlying agricultural public expenditure data and refines reporting within the COFOG framework at a much-disaggregated level. The aggregation from this case study will help develop a framework that can be applied to different agricultural public expenditure coding systems to track and improve metrics on public spending in agriculture, both in volume and in composition. The framework provides a refined and standardized tool to support meaningful comparisons across countries and time at different levels of aggregation. It allows policymakers to measure, monitor, and evaluate resource allocation in support of agriculture in a timely manner and allows researchers to extract expenditure data flexibly and consistently according to different purposes in a transparent way.

The remainder of the paper is organized as follows. Section 2 describes the source and structure of the audited government expenditure accounts, and section 3 presents expenditure aggregates by various classifications, including administrative and functional and economic classification. The definition and pattern of public agricultural expenditures is presented in section 4. The last section concludes with policy recommendations based on the analysis.

2. INSTITUTIONAL FRAMEWORK AND BUDGET PROCESS IN KENYA

The legal framework of public finances management in Kenya is specified in the constitution (Government of Kenya [GOK] 1997; 2010). The Financial Management Act (GOK 2004) provides operational guidelines on the exchequer account and personnel responsible for administering public resources. In addition to the constitution, there is an array of regulations to add legal details, including the Public Audit Act (GOK 2003a), Public Procurement and Disposal of Public Assets Act (GOK 2005), Local Government Act (GOK 1998; PEFA 2010), and various financial and legal notices issued by the Ministry of Finance (MOF) (PEFA 2006, 2009; 2012).

Parliament approves public expenditure and oversees expenditure through the Public Accounts Committee and the Public Investment Committee. The Kenya National Audit Office, an autonomous agency provided for in the constitution, audits all government accounts and reports directly to Parliament. The 2010 constitution stipulates two independent appointments: the auditor-general and the controller of budget; both are appointed by the National Assembly and are responsible for the implementation of government budgets. However, MOF has the institutional arrangement and covers almost all matters relating to public financial affairs including budget supply, accounting, debt management, pension, external resources, economic resources, audit, public procurement, and government investment and public enterprise. Within each ministry, the consolidated fund and financial management operations are managed by financial personnel posted to the line ministries.

The budgeting process includes several stages. In the budget preparation stage, the Budget Outlook Paper (formerly the Budget Review and Outlook Paper) assesses the current economic situation and provides broad fiscal parameters for the budget year and two years forward based on government strategies and policies. The Budget Strategy Paper (formerly the Budget Policy Statement) signals policy priorities by providing firm, sector, and ministerial spending ceilings, which are used for the preparation of the draft budget estimates. Several prebudgeting exercises and documents, including ministerial expenditure reviews and medium-term budget strategy papers, also give multiyear forecasts and the costs of sector strategies in central government and line ministries. After some clarifications a budget circular is issued by MOF to line ministries and government agencies with clear technical guidance and a timeline for the preparation of the budget. Each line ministry and state corporation then prepares its budget estimates and submits them to MOF for the consolidated appropriation bill.

Next the Budget Statement (“Budget Speech”), including a statistical annex, is delivered to the national assembly along with the Budget Estimates of Revenue, Recurrent Expenditure, and Development Expenditure. The appropriation process starts after approved by the cabinet secretary. Each line ministry sets up two mirror accounts (recurrent and development) in the central bank to reflect the activities of the line ministries.

At the beginning of the fiscal year, MOF receives information about cash flow projections, budget provisions, revenue projections, and domestic borrowing limits from each line ministry. A monthly spending limit is prepared and communicated to the line ministries on a three-month-in-advance rolling basis. The status of each ministry’s account is monitored and reported daily through the central bank mirror accounts to provide accurate and timely information. Modifications are made to the bank accounts to accommodate any borrowing requirements or changes. Actual expenditure is tracked in the Quarterly Economic and Budgetary Review, and the final expenditure is listed in the Financial Statements Reports from the auditor general.

Since 1997, GOK has been implementing a project to improve financial management of public funds. During the first two phases from 1997 to 2002, an Integrated Financial Management Information System (IFMIS) strategy was developed. The software and hardware purchases started in 2002, and the IFMIS was piloted in 2003/2004 and then rolled out to the system. The budgetary and financial data in the government accounts are recorded in the chart of accounts.

The performance of the Public Financial Management (PFM) system of GOK is assessed using the 31 indicators defined in the Public Expenditure and Financial Accountability methodology. It was conducted in 2006, 2008, and 2012 (PEFA 2006; GOK 2012) to inform the government's PFM reform strategy and donors' development assistance strategies such as the general budget support programs. The series of assessments noted significant progress in aggregate fiscal discipline, procurement practice, strategic allocation of resources, and efficient service delivery. While predictability of overall revenues and expenditures has been maintained in aggregate, credibility of the budget is undermined by significant in-year variations across budget heads. An integrated personnel and payroll system has been deployed, but it remains not fully comprehensive and does not have fully effective controls. A sustained and focused effort is needed to properly recognize the links between the different areas of PFM to achieve the desired PFM performance objectives. It was noted that despite a clear and detailed budget preparation calendar the budget has always been approved well after the start of the fiscal year partly due to late submission to Parliament (PEFA 2006; 2009; 2012).

3. KENYA DATA DESCRIPTION

All prebudget documentation and annual budget documents of Kenya are transparent and available to the public. The Kenya Expenditure dataset comprises expenditure and revenue data for the period from 2002/2003 to 2009/2010, downloaded from the public domain <https://opendata.go.ke/> (Kenya Open Data 2014). The definition of each variable with the agency is summarized in Table 3.1.

Table 3.1 Variable definitions

Level	Category	Administrative unit
1 (2 digits)	Vote	Ministries and ministerial level offices
2 (3 digits)	Subvote	Department within ministries
3 (3 digits)	Head	Administrative units and programs
4 (4 digits)	Subhead	Lower administrative unit, program, projects
5 (6 or 7 digits)	Line item	Description of cost
—	District, county	Geographical classifications

Source: Authors.

Level of Government

Expenditures are reported according to the level of recipient agencies: central government, Constituency Development Fund (CDF), or local authorities (LAs). Central government expenditure refers to expenditures that occur at central government ministries, departments, and agencies.

Established several decades ago, the 175 LAs are the only decentralized level of government, mainly providing municipal services. They have a limited mandate and constitute less than 5 percent of the total general government budget. Every year the central government transfers 2.5 percent of total income tax to LAs, and the transfer comprises two parts: the transfer of a fixed amount of 1.5 million shillings to each LA and a transfer that is calculated based on population and rural/urban composition, using a predefined formula. Together, central transfers comprise 30–40 percent of the total financial resources of LAs (PEFA 2009; 2012; Kenya, MoF 2006). Three months before the beginning of a fiscal year, LAs are informed about their shares in total central government transfer, and the budget of LAs is the combination of the transfer and local revenue. After the central government budget is approved, the transfers are made to each LA on a quarterly basis. The government has planned to steadily increase the share of LA expenditure in the total expenditure in the devolution process.

This situation has been further complicated by the creation of the CDF in 2003 according to the Constituencies Development Fund Act (GOK 2003b). The CDF is financed by 2.5 percent of total government ordinary revenue and represents 1–2 percent of total expenditure. It was designed to promote equal distribution of development resources across 210 parliamentary constituencies in Kenya and to reduce poverty by supporting constituency-level smaller development projects (water, health, and education) projects. CDF projects are independent of the central and local governments. Central government and LA councils do not decide on the use of CDF resources or approve CDF projects. Instead, CDF is allocated by the 10-member CDF committees, which consist of nongovernment representatives including national members of Parliament, local political activists, businessmen, and representatives of community groups. CDF projects are implemented by the regional agencies of the central government ministries.

Budget Classifications

Budget classification specifies how the budget is organized and recorded to control, manage, and report on the execution of the government's budget. It has fundamental implications for resource allocation, budget monitoring, policy formulation, and performance and is the foundation for a transparent and coherent budget. There are several angles to classify expenditure, and the three primary classifications are administrative, economic, and functional classifications (Jacobs, Héris, and Bouley 2009; Cooper and Pattanayak 2011). The three classifications are distinct, with different purposes, and should be independent of each other for each spending record.

The administrative classification identifies the structure of the government organizations (for example, ministries, department, agencies, and other budget-funded entities) that deliver government functions. The entities are responsible for managing the public funds, such as the Ministry of Agriculture and other lower-level administrative units (for instance, Department of Crop Development). The administrative classification is essential for accountability, budget administration, and legal appropriation purposes in management of the budget on a daily basis because it identifies the administrative structure of the organization or entity that allocates resources to implement specified policy objectives.

The economic classification identifies the type of expenditure incurred, such as capital, salaries, goods and services, and transfers. The economic classification may be used to indicate whether government disperses funds for the construction of buildings, for the purchase of goods, or to cover personnel costs. It is clearly defined in GFS and has been used for fiscal control, macroeconomic analysis, compliance control, internal management, and statistical reporting. Government payroll control is a good example of economic classification.

The functional classification categorizes government expenditures according to the purposes and objectives for which they are intended or the programs the government wants to deliver to society and to affect the economy. It is required in the formulation of public policy and efficient allocation of resources. Take agricultural sector as an example; important functional classifications include expenditures assigned for agriculture, forestry, fishing and hunting, and agricultural R&D and extension. The functional classification might overlap with the government's administrative classification, but it is free from administrative or economic classification in most cases. This renders it especially useful in analyzing the allocation of resources among sectors, across countries, and during multiple fiscal years. Functional classification is also useful in policy formulation, performance accountability, policy analysis, and effectiveness comparison. COFOG provides a widely adopted international standard for functional classification (IMF 2001).

While the coding system in the government accounts may not be uniformly structured across countries, spending data are organized according to the codes numerically, alphabetically, or in a combination of the two. In Kenya, the chart of accounts for government expenditure is organized in a numerical coding system based on the hierarchical and nested administrative structure of the government. The highest level government administrative units, for example, ministries and the president's office, are represented by two-digit codes. Within each ministry, a three-digit code is used to label a second-level government administrative unit, for example, a department within a ministry. Similarly the third-level administrative units, programs, and projects are nested within the second-level units and are assigned three-digit codes.

In the Kenya Expenditure Database, the first-, second-, and third-level administrative units are called "vote," "subvote," and "head," respectively. The term "vote" is widely used in public sector accounting where a vote identifies one ministerial level government agency. A budget associated with one vote can be broken down to subvotes and lower level administrative units called "heads." The administrative classification follows the structure as Table 3.1.

Vote represents 54 ministerial level government agencies in the central government, 210 constituencies in CDF, and 175 local councils in LAs in Kenya. Within the central government, the vote code can be used to uniquely identify a ministry or a central level government agency. Geographical classifications are mainly used for CDF and LA expenditures.

Table 3.2 provides an example of administrative classifications within the Ministry of Agriculture. The ministry vote code is 10, and the six subvotes are coded 100, 101, 102, 103, 104, and 105 in 2010/2011 under the administrative classification system. There are 36 unique head codes, starting at 180 and ending at 947 (that is, not in chronological order). The IFMIS codes integrate the subvote and head codes in numerically sequenced order. For example, the fourth subvote (information management for the agriculture sector), under which four heads fall, is coded as 10.104.254, 10.104.257, 10.104.258, and 10.104.259, whereby 10 is the vote code, 104 is the subvote code, and 254, 257, 258, and 259 are the head codes. A complete list of votes and subvotes is presented in Table A.2. At each administrative level, the numerical code should uniquely identify the administrative units.¹

Table 3.2 Structure of government expenditure data in Kenya

Variable	Central	CDF	Local
Central or subnational spending	Central	Constituency	Local authorities
Vote, constituency, or local authority	Name of ministries	Name of constituencies	Name of councils
Subvote	Divisions within ministry	—	—
Head	Departments within divisions	—	—
Subhead	Agencies within head	—	—
District code	—	—	—
District	District name	—	—
CDF project	—	CDF project name	—
County	—	County name	County name
MTEF sector	Sector defined by MTEF	Sector defined by MTEF	Sector defined by MTEF
Subsector	Subsector defined by MTEF	Subsector defined by MTEF	Subsector defined by MTEF
Current or capital	Capital, current, interest, or other	Capital, current, or other	Capital, current, interest, or other
GFS economic classification	Economic classification in GFS	Economic classification in GFS	Economic classification in GFS
Line item	Description of activities	Description of activities	Description of activities
Estimates	Budget	Budget	Budget
Revised	Revised budget	Revised budget	Revised budget
Executed	Executed or actual spending	Executed or actual spending	Executed or actual spending
A-in-A	Whether A-in-A or not	—	—
Budget type	Development or recurrent	Development	Development or recurrent

Source: Author's compilation.

Note: Dashes indicate not reported. A-in-A = Appropriations-in-Aid; CDF = Constituency Development Fund; GFS = government finance statistics; MTEF = medium term expenditure framework.

Within each head, the data are reported by line item, with each item recording a financial transaction. The transaction is the lowest level at which actual data are recorded according to the following rules after 2005/2006:

¹ The first and second levels of administrative units can be uniquely identified by the numerical codes, but there are cases of mislabeling at the third level of administrative units. Adjustments are made to ensure the one-on-one correspondence between the numerical code and the heads.

- The 21 series denotes all those expenditures related to compensation to employees.
- The 22 series denotes all those expenditures related to use of goods and services.
- The 23 series denotes expenditures related to consumption of fixed capital.
- The 24 series denotes all those expenditures related to interest payments.
- The 25 series denotes those expenditures related to subsidies.
- The 26 series denotes those expenditures related to grants and other transfers.
- The 27 series denotes all those expenditures related to social benefits.
- The 30 series denotes expenditures related to investment in nonfinancial assets.
- The 31 series denotes expenditures related to acquisition of nonfinancial assets.
- The 35 series denotes those expenditures on disposal of nonfinancial assets.

A GFS economic classification is assigned with each transaction to simplify the grouping into compensation of employees, use of goods and services, capital, grants, and other. The economic classification for 2005/2006 is revised to comply with GFS. Each line item is labeled an economic classification by the author, and an example of economic classification in the Ministry of Agriculture is given in Table 3.3.

Table 3.3 Administrative classification in the Ministry of Agriculture (vote 10) in 2008/2009

Subvote code	Subvote	Head code	Head
10.100	General Administration and Planning	10.100.195	Agricultural boards and committees services
		10.100.191	Agricultural attaches' offices
		10.100.228	Finance and accounts department
		10.100.190	Headquarters administrative and technical services
		10.100.193	Development planning services
10.101	Policy, Legal Reviews and Regulation of Agricultural Inputs and Outputs	10.101.238	Horticultural crops development authority (HCDA)
		10.101.230	Pesticide control products board (PCPB)
		10.101.596	Kenya plant health inspectorate service (KEPHIS)
		10.101.198	Policy and agricultural development coordination services
10.102	Monitoring and Management of Food Security	10.102.502	Food security and management programme "Njaa Marufuku Kenya"
		10.102.235	Headquarters land and crop development services
10.103	Facilitation and Supply of Agriculture Extension Services	10.103.638	Provincial agricultural extension services
		10.103.246	National agriculture and livestock extension programme
		10.103.255	Extension research liaison and technical building
		10.103.271	Nation extension project
		10.103.759	Kenya agricultural research institute
		10.103.760	Soil and water management research
		10.103.229	Agriculture technology development and testing stations
		10.103.761	National crops and horticultural research project
		10.103.661	District horticultural crop production services
		10.103.225	Central Kenya dry areas and smallholder community
		10.103.765	Animal production research
		10.103.237	Horticultural crop development services
		10.103.202	Agricultural department headquarters
		10.103.763	Veterinary research
		10.103.639	District agricultural extension services
10.103.260	Farmers training centres		

Table 3.3 Administrative classification in the Ministry of Agriculture (vote 10) in 2008/2009

Subvote code	Subvote	Head code	Head
10.104	Information Management for Agriculture Sector	10.104.261	Kilifi Institute of Agriculture
		10.104.254	Agricultural, business, market development, and agricultural information services
		10.104.257	Agricultural information centre
		10.104.258	Embu Agricultural College
		10.104.259	Bukura Agricultural College
10.105	Protection of Natural Resources Base for Agriculture	10.105.247	Land development and machinery services

Source: Author's compilation.

According to the Public Financial Management Performance Assessment (PEFA 2009), “the budget formulation and execution is based on administrative and economic classification using GFS standards and other standards for consistent reporting.” These two dimensions of classifications are comprehensive and detailed, and the economic classification is independent of the administrative classification (Table 3.4).

On the contrary, the IFMIS system does not include functional coding as illustrated in the structure of the database. In the Medium Term Expenditure Framework expenditure ceilings are provided for sectors including physical infrastructure, human resources development (education, health, public administration, and labor), justice, national security, information and communication technology, and special programs. This sector group covers some aspects of a functional classification but fails to disclose the linkage from sector to function, and the sector expenditure may contain substantial social security grants (PEFA 2009). Although there is no consistent application of a functional classification according to COFOG standards in the budgeting process and accounting code structure, this kind of classification is reported in GFS (IMF) annually and in some government documents such as the Budget Review and Outlook Paper (GOK). As pointed out in the PFMP documents (PEFA 2009; 2012), the administrative and economic classifications are reflected in IFMIS and budget estimates and reporting, whereas functional classification is not consistent with COFOG and is reflected only in annual budget reporting. This study uses the administrative and economic classification provided in the data with some modifications (to correct mislabeled transactions). A five-digit functional classification is created as defined by the international standard using lower administrative units, programs, or projects described in the head name.

In addition, the expenditure data are presented in three different variables: estimates, revised and executed, reflecting distinct stages in the budgeting process; initial budget estimates, midyear revision; and year-end aggregate after audition. This analysis focuses on executed budget to examine the actual expenditure of the public sector. The operational expenditures of state corporations and special funds are treated as extrabudgetary and left unreported. Donor support is provided in the form of budget support (European Union only), cash-funded operations included in the recipient country's budget (grants and loans), cash-funded operations not included in government budget (appropriations in aid), and aid in-kind (offshore payments) (Kenya, MSPNDV 2010). Donor-funded expenditure is a significant part of the government budget and represented about 45 percent of total budgeted development expenditure in 2010/2011 (GOK 2012). Yet planned donor operations are only partially included in the budget estimates, but actual spending is not. Some donors operate off budget, and this type of spending is not included in the budget. Hence, it is possible that the expenditure database might not completely represent external expenditure.

Table 3.4 Economic classification in the Ministry of Agriculture

Economic classification	Line code	Line
Capital	3110200	Construction of buildings
Capital	3110300	Refurbishment of buildings
Capital	3111100	Purchase of specialised plant, equipment and machinery
Capital	3111200	Rehabilitation and renovation of plant, machinery and equipment
Capital	3110600	Overhaul and refurbishment of construction and civil works
Capital	3110800	Overhaul of vehicles and other transport equipment
Capital	3110700	Purchase of vehicles and other transport equipment
Capital	3111500	Rehabilitation of civil works
Capital	3111000	Purchase of office furniture and general equipment
Capital	3110900	Purchase of household furniture and institutional equipment
Capital	3110500	Construction and civil works
Capital	3130100	Acquisition of land
Wages and salaries	2110300	Personal allowance - paid as part of salary
Wages and salaries	2110400	Personal allowance - paid as reimbursements
Goods and services	2211300	Other operating expenses
Goods and services	2210900	Insurance costs
Goods and services	2211000	Specialised materials and supplies
Goods and services	2210800	Hospitality supplies and services
Goods and services	2220100	Routine maintenance - motor vehicles
Goods and services	2220200	Routine maintenance - other assets
Goods and services	2211200	Fuel, oil and lubricants
Goods and services	2210600	Rentals of produced assets
Goods and services	2210100	Utilities, supplies and services
Goods and services	2210200	Communication, supplies and services
Goods and services	3111400	Research feasibility studies, project preparation and design, project supervision
Goods and services	3111300	Purchase of certified seed, breeding stock and live animals
Goods and services	2211100	Office and general supplies and services
Goods and services	2210500	Printing, advertising and information supplies and services
Grants	2620100	Membership fees and dues and subscriptions to international organizations
Grants	2640400	Other current transfers, grants and subsidies
Grants	2630100	Current grant to government agencies and other levels of government
Grants	2640500	Other capital grants and transfers
Grants	2630200	Capital grant to government agencies and other levels of government
Other	2640100	Scholarships and other educational benefits
Training	2210700	Training expenses
Travel	2210300	Domestic travel and subsistence, and other transportation costs
Travel	2210400	Foreign travel and subsistence, and other transportation costs
Wages and salaries	2110200	Basic wages - temporary employees
Wages and salaries	2110100	Basic salaries - permanent employees

Source: Author's compilation.

4. KENYA DATA AGGREGATE

Equipped with a thorough understanding of the structure of the expenditure coding system, the expenditure data can be aggregated according to the user's specific needs after each expenditure record is assigned to the three types of classifications. This detail-oriented process allows users to flexibly extract information about government spending by different classifications: by ministries defined in administrative classification, by capital and noncapital spending defined in economic classification, and by functions defined in functional classification. This classification system allows easy understanding and tracking of government expenditure.

Administrative Classification

Central government expenditure data are aggregated by administrative classification at ministerial level in Table 4.1, along with spending that occurred in CDF and LAs. The Kenyan fiscal system is highly centralized in organizational structure, with more than 93 percent of total national expenditure undertaken by the central government in fiscal year 2010/2011. On average developing countries devote 86 percent of total budgetary expenditure to central governments, and large countries generally allocate more than half of their total expenditure to their central governments (Shah 2004). This analysis will focus on central expenditure due to its dominance.

Table 4.1 Central government expenditure by administrative classification, in billions of shillings

Vote code	Vote	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
01	Office of the President, Ministry of State for Provincial Administration and Internal Security	23.4	26.0	30.7	38.7	26.7	34.8	41.3	39.1	47.8
02	State House	0.9	1.0	0.8	1.1	1.3	1.4	1.2	1.3	1.3
03	Ministry of State for Public Service, Directorate of Personnel Management	1.8	1.4	1.7	2.0	2.5	2.2	1.5	1.8	1.6
04	Ministry of Foreign Affairs	4.1	4.7	5.7	6.3	6.6	7.1	9.0	7.7	8.5
05	Office of the Vice President and Ministry of Home Affairs	6.2	7.9	7.4	7.5	7.2	7.6	10.3	8.9	13.4
06	Ministry of Planning and National Development	1.1	1.5	1.9	1.8	2.0	3.2	14.9	24.0	7.7
07	Office of the Deputy Prime Minister and Ministry of Finance	19.8	15.8	17.3	25.6	41.0	31.3	15.2	23.5	32.7
08	Ministry of State for Defence				25.6	25.1	36.8	41.2	48.2	50.3
09	Ministry of Regional Development	0.9	1.0	1.0	1.0	1.0	1.2	1.6	4.7	6.9
10	Ministry of Agriculture	8.0	6.7	6.0	7.1	10.0	13.6	13.3	12.9	17.1
11	Ministry of Health and Medical Services	15.7	16.8	19.4	23.0	27.5	26.2	24.8	26.7	25.6
12	Office of the Deputy Prime Minister and Ministry of Local Government	4.1	4.3	5.0	6.7	9.2	13.0	12.6	13.5	17.4
13	Ministry of Roads, Public Works and Housing	11.1	14.3	17.6	20.2	30.4	41.2	56.7	55.9	71.5
14	Ministry of Transport	1.9	2.4	3.6	3.8	7.9	7.3	5.2	6.8	4.6

Table 4.1 Continued

Vote code	Vote	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
15	Ministry of Labour and Human Resource Development	1.9	0.7	0.9	1.0	1.2	1.3	1.3	1.8	1.5
16	Office of the Deputy Prime Minister and Ministry of Trade	2.0	2.1	2.4	1.7	3.4	1.0	1.9	2.2	2.2
17	Ministry of Justice, National Cohesion and Constitutional Affairs	0.1	0.5	1.9	1.4	1.5	1.5	1.6	2.4	4.1
18	Ministry of Gender, Sports, Culture, Social Services, Children and Social Development	0.9	1.4	1.7	2.0	2.3	2.3	2.7	4.4	4.0
19	Ministry of Livestock Development		2.8	2.8	3.0	4.1	4.2	5.1	5.3	6.0
20	Ministry of Water and Irrigation	3.7	6.4	6.6	6.3	9.5	12.7	18.8	21.7	29.0
21	Ministry of Environment and Mineral Resources	2.8	3.1	3.0	2.9	3.6	1.4	3.2	3.7	4.4
22	Ministry of Cooperative Development and Marketing	0.5	0.7	1.2	0.6	0.9	1.0	1.0	1.0	1.2
23	Cabinet Office					1.2	1.7	2.7	2.1	1.1
24	Ministry of East African Community			0.5	0.5	0.8	0.4	0.5	0.9	1.0
25	State Law Office and Office of the Attorney General	0.4	0.5	0.5	0.7	0.7	0.7	1.0	1.2	1.5
26	The Judiciary	1.3	1.4	1.5	1.7	2.1	2.1	2.5	3.1	3.8
27	Public Service Commission of Kenya	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4
28	Kenya National Audit Office	0.3	0.3	0.9	0.9	1.1	1.1	1.1	1.2	1.3
29	National Assembly	3.6	4.1	4.4	4.8	4.5	5.7	6.5	6.6	7.4
30	Ministry of Energy	9.8	9.0	8.2	8.6	8.6	18.0	30.9	30.8	29.6
31	Ministry of Education	63.9	75.5	81.9	92.6	101.0	104.8	114.7	126.3	136.7
32	Ministry of Information and Communications			0.3	1.1	1.7	2.4	2.6	2.9	4.4
33	Electoral Commission of Kenya	3.8	1.0	1.2	1.3	2.7	6.9	0.5	6.8	7.1
34	Kenya Anti-Corruption Commission									1.5
35	Ministry of State for Special Programmes					6.0	6.3	14.2	7.4	11.3
36	Ministry of Lands and Housing	1.7	1.5	1.9	2.5	1.9	3.1	2.0	3.6	5.0
40	Ministry of State for Immigration & Registration of Persons					2.9	2.9	3.6	4.4	5.0
41	Office of the Vice President and Ministry of State for National Heritage					1.1	1.8	1.8	2.2	2.1
42	Ministry of Youth Affairs and Sports			0.4		4.2	4.7	6.8	10.5	9.1

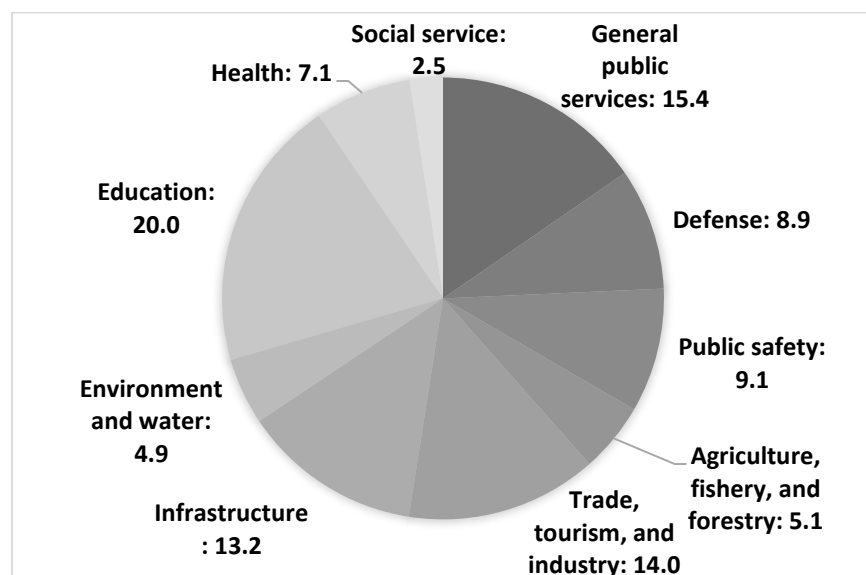
Table 4.1 Continued

Vote code	Vote	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
43	Ministry of Science and Technology					2.8	16.7	22.3	26.7	31.9
44	Ministry of Housing					1.5	2.7	3.3	3.3	2.8
45	National Security Intelligence Service	3.5	3.9	4.2	5.1	5.9	8.1	7.7	10.1	10.6
46	Ministry of Tourism and Wildlife	2.2	2.2	2.4	2.2	2.8	1.5	2.1	2.5	2.5
48	Office of the Prime Minister						0.2	1.2	2.1	2.8
49	Ministry of Public Health and Sanitation						3.6	7.1	12.5	22.7
51	Pensions and Gratuities	9.5	11.9	13.9						
55	Ministry of Forestry and Wildlife						4.5	5.3	6.4	7.1
56	Ministry of Fisheries Development						0.8	0.9	2.6	3.5
57	Ministry of Nairobi Metropolitan Development						0.0	1.4	1.4	1.2
58	Ministry of Development of Northern Kenya and Other Arid Lands						1.3	2.6	2.9	2.5
59	Ministry of Public Works						2.2	3.1	4.2	6.0
60	Ministry of Industrialization						1.4	1.8	2.4	3.3
61	Interim Independent Boundaries Review Commission								0.3	
	Total	211.1	232.8	260.9	311.6	378.7	458.6	535.3	605.3	684.1

Source: Author's calculations.

With a growing economy, the government expenditure has been expanding during the past decade. The top ministries in terms of fund allocation are the Ministry of Education (20 percent of total central government budget in 2010/2011), and the Ministry of Roads, Public Works and Housing (10.5 percent) (Table 4.1). The share of the Ministry of Defense remained stable at between 7 and 8 percent. The five line ministries of agriculture (Agriculture, Livestock, Fishery, Forestry, and Cooperative) together received only 5 percent of total central government expenditure (Figure 4.1).

Figure 4.1 Central government expenditure by administrative classification in 2010/2011, in percentage



Source: Author's calculations.

IFMIS has been revised over time because the government administrative structure has changed and some functions were shifted to different ministries. Hence ministries and government agencies have acquired or lost different subvotes, and subvotes have acquired or lost different heads due to structure reshuffle. The change in the government administrative structure is reflected in the expenditure reporting. Table 4.2 provides an example that existing subvotes and heads shifted to newly created ministries. The Ministry of Agriculture (vote 10) exists in all the years, but subvotes within it changed over time. In 2003, the Ministry of Livestock Development (vote 19) was established with livestock and fishery related activities moved from the Ministry of Agriculture to this new ministry. In 2007, the Ministry of Fisheries Development (vote 56) was separated from the Ministry of Livestock Development to become a new ministry, and the specific subvote "Fishery Development" also migrated from the Ministry of Livestock Development to the new ministry. Recently, the livestock and fishery ministries were merged back into the Ministry of Agriculture.

The pattern of shifting administrative units within and across ministries is manifest when examined at the head level in Table 4.3. Unique codes can be helpful in identifying administrative units even when they were migrated to a different ministry due to government structural change. For example, several government units related to fisheries also move along line ministries. They were managed by subvote 10.102, "Monitoring and Management of Food Security," of the Ministry of Agriculture in 2002/2003, which was moved to subvote 19.192, "Fisheries Development," of the Ministry of Livestock Development from 2003/2004 to 2006/2007, and moved again to subvote 56.561, "Fisheries Development," of the Ministry of Fishery Development in 2007/2008 to 2010/2011. It is worth noting that regardless of the ministry they belong to, unique head codes suggest that these administrative units or projects did not change their function but fell under a different administrative structure. For example, these unique heads include Deep Sea Fisheries (head code 548), Fisheries (head code 532), Fisheries Regional Centres (head code 539), Fisheries Stations (head code 534) and Fisheries, Research and Hatchery Stations (head code 537).

Table 4.2 Changes in the structure of subvotes in agriculture, livestock, and fishery, in billions of shillings

Vote	Subvote code	Subvote	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Ministry of Agriculture	10.100	General administration and planning	0.63	1.12	0.61	0.51	1.34	0.97	0.85	1.39	2.00
	10.101	Policy, legal reviews and regulation of agricultural inputs and outputs	0.26	0.37	0.28	0.54	0.73	0.86	0.95	0.46	0.59
	10.102	Monitoring and management of food security	0.64	0.14	0.29	0.52	0.93	3.15	0.81	1.22	1.43
	10.103	Facilitation and supply of agriculture extension services	2.23	2.69	2.35	5.09	6.05	7.11	6.77	6.71	8.65
	10.104	Information management for agriculture sector	2.23	1.66	1.85	0.16	0.35	0.57	3.37	2.31	4.13
	10.105	Protection of natural resources base for agriculture	0.50	0.40	0.35	0.29	0.62	0.90	0.52	0.77	0.34
	10.106	Crop and pest control	0.91	0.05	0.05						
	10.107	Protection of natural resources base for agriculture	0.62	0.23	0.23						
Ministry of Livestock Development	19.190	General administration and planning		0.12	0.12	0.31	0.46	0.57	0.60	0.53	0.73
	19.191	Livestock development		0.67	0.73	0.93	1.33	1.57	1.85	2.03	2.11
	19.192	Fisheries development		0.56	0.64	0.53	0.75				
	19.193	Veterinary services		1.40	1.34	1.25	1.59	2.02	2.66	2.74	3.18
Ministry of Fisheries Development	56.560	General administration and planning						0.02	0.10	0.18	0.18
	56.561	Fisheries development						0.76	0.78	2.39	3.33

Source: Author's calculations.

Table 4.3 Expenditures related to fishery under changed government administrative structure, in billions of shillings

Head code	Head	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
56.561.532	Fisheries						0.119	0.085	0.502	0.144
19.192.532	Fisheries		0.108	0.139	0.102	0.130				
10.102.532	Fisheries	0.066							0.000	
10.102.534	Fisheries Stations	0.163								
56.561.534	Fisheries Stations						0.216	0.220	0.246	0.357
19.192.534	Fisheries Stations		0.165	0.189	0.158	0.211				
10.102.537	Fisheries, Research and Hatchery Stations	0.021								
19.192.537	Fisheries, Research and Hatchery Stations		0.030	0.041	0.015	0.029				
56.561.537	Fisheries Regional Centres						0.015	0.032	0.022	0.116
10.102.539	Fisheries Regional Centres	0.022								
56.561.539	Fisheries Regional Centres						0.018	0.032	0.040	0.038
19.192.539	Fisheries Regional Centres		0.025	0.028	0.017	0.023				
56.561.548	Deep Sea Fisheries						0.001	0.004	0.005	0.005
10.102.548	Deep Sea Fisheries	0.001								
19.192.548	Deep Sea Fisheries		0.002	0.005	0.003	0.003				
10.104.645	Kenya Marine Fisheries Research Institute	0.221								
19.192.645	Kenya Marine Fisheries Research Institute		0.221	0.221	0.233	0.358				
56.561.645	Kenya Marine Fisheries Research Institute						0.393	0.404	0.481	0.515

Source: Author's calculations.

Functional Classification

It is possible to monitor and track expenditure according to functional classification using programs or projects described in administrative classification. Functional classification also has the advantage of independence of the administrative structure, which is especially helpful in the cases of separation and merging of government agencies, which had required changes in coding structures. An example of the mapping relationship for agriculture related ministries, defined by the author, is summarized in Table A.3. The aggregates by COFOG functional classification are reported in Table 4.4. The share of general public services expenditure in central government budget declined over time, and the share stayed steady for defense and public order and safety. Economic affairs exhibited an increase share from 18 percent in 2002/2003 to 26 percent in 2010/2011, but the share for agriculture increased marginally from 3.8 percent to 4.3 percent during the same period. Figure 4.2 indicates that about a quarter of the total budget was appropriated to economic development in 2010/2011, including agriculture, trade, tourism and industry, and infrastructure construction. Another one-third was used to cover administration operations, public order, and defense. Education alone represents 20 percent of the central government budget, while health and other social services make up the remaining 9.5 percent. The top spenders are education, public administration, public order and safety, and infrastructure, similar to the assessment of the Ministry of Devolution and Planning (2013).

Table 4.4 Government expenditure by functional classification, in billions of shillings

Functional classification	COFOG code	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
General public services	701	47.8	49.9	57.4	53.1	78.7	82.3	76.3	103.2	105.6
Executive and legislative organs, financial and fiscal affairs, external affairs	7011	29.7	32.7	37.5	44.1	67.5	65.8	53.6	63.7	78.8
Executive and legislative organs	70111	10.1	12.0	13.1	15.8	18.0	26.0	28.7	30.2	35.1
Financial and fiscal affairs	70112	15.5	15.9	18.1	21.4	42.0	32.3	15.3	24.7	33.8
External affairs	70113	4.1	4.7	6.3	6.9	7.5	7.5	9.7	8.9	9.9
General services	7013	4.5	4.0	4.5	7.2	8.2	9.0	21.3	32.1	19.1
General personnel services	70131	1.9	1.5	1.8	2.2	2.8	2.5	1.9	2.2	2.0
Overall planning and statistical services	70132	0.8	1.3	1.5	1.9	2.1	3.4	16.9	26.9	11.6
Other general services	70133	1.8	1.3	1.3	3.1	3.3	3.2	2.5	3.0	5.5
Other	7016	3.9	1.0	1.2	1.3	2.8	7.0	0.6	6.9	7.2
Transfer within government	7018	9.7	12.2	14.2	0.5	0.3	0.6	0.7	0.5	0.5
Defense	702				25.6	25.1	36.8	41.2	48.2	50.3
Public order and safety	703	22.5	30.2	31.3	40.2	41.1	50.1	60.6	60.4	75.5
Police services	7031	14.4	19.3	18.8	26.4	24.7	30.8	38.3	35.5	42.3
Law courts	7033	1.9	2.4	3.6	4.0	4.5	4.8	5.7	7.1	10.9
Prisons	7034	2.7	4.6	4.7	4.7	6.0	6.4	9.0	7.7	11.7
Other	7036	3.5	3.9	4.2	5.1	5.9	8.1	7.7	10.1	10.6
Economic affairs	704	34.8	40.0	45.0	55.9	79.2	106.9	146.9	153.9	176.1
General economic, commercial and labor affairs	7041	3.6	3.5	3.9	3.8	5.9	5.2	6.4	7.2	7.1
General economic and commercial affairs	70411	3.0	2.9	3.3	3.0	4.9	4.1	5.3	6.0	5.8
General labor affairs	70412	0.6	0.6	0.6	0.7	1.0	1.1	1.1	1.2	1.3
Agriculture, forestry, fishing, and hunting	7042	9.2	11.1	12.0	13.8	19.6	25.6	34.7	34.0	38.6
Agriculture	70421	7.4	9.0	9.2	11.4	16.3	21.4	29.6	26.2	29.5
Forestry	70422	1.08	1.26	1.43	1.27	1.69	2.15	3.09	4.08	4.62
Fishing and hunting	70423	0.7	0.9	1.4	1.1	1.6	2.1	2.1	3.6	4.5
Fuel and energy	7043	6.4	6.2	5.8	4.6	7.0	13.6	30.5	29.5	29.2
Petroleum and natural gas	70432	0.4	0.2	0.2	0.4	0.2	0.2	0.3	7.2	1.2
Other fuels	70434	4.7	3.8	2.8	1.1	0.1	1.0	7.4	7.6	10.8
Electricity	70435	1.3	2.3	2.8	3.2	6.7	12.4	22.8	14.7	17.3
Mining, manufacturing, and construction	7044	0.1	0.2	0.6	1.3	1.7	1.5	2.6	3.7	1.7
Mining of mineral resources other than mineral fuels	70441	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3
Manufacturing	70442	0.00	0.00	0.00	0.00	0.00	0.03	0.32	0.7	1.4
Construction	70443	0.1	0.1	0.5	1.2	1.5	1.2	2.0	2.7	0.0

Table 4.4 Continued

Functional classification	COFOG code	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Transport	7045	8.7	10.9	13.6	15.7	30.4	42.4	57.1	56.0	70.1
Road transport	70451	7.8	10.8	13.0	15.4	27.4	40.5	56.1	55.2	69.3
Water transport	70452	0.1	0.0	0.0	0.2	0.3	0.2	0.3	0.1	0.1
Railway transport	70453		0.1	0.5	0.0	2.7	1.6	0.7	0.6	0.7
Air transport	70454	0.8	0.00	0.02	0.05	0.04	0.03	0.04	0.1	0.1
Communication	7046		0.00	0.03	0.05	0.03	0.04	0.04	0.04	0.03
Other industries	7047	1.9	2.3	2.1	2.1	2.5	2.6	3.4	6.5	7.9
Tourism	70473	1.2	1.5	1.2	1.3	1.6	1.5	2.1	2.5	2.5
Multipurpose development projects	70474	0.7	0.8	0.9	0.9	0.9	1.1	1.4	4.0	5.4
R&D	7048	3.3	3.3	3.3	4.6	5.6	5.8	6.0	8.6	9.5
R&D general economic, commercial, and labor affairs	70481	0.01	0.01	0.02	0.01	0.03	0.04	0.1	0.1	0.0
R&D agriculture, forestry, fishing, and hunting	70482	3.0	2.9	3.0	4.3	5.0	5.3	5.2	7.6	8.0
R&D mining, manufacturing, and construction	70484	0.2	0.2	0.2	0.2	0.4	0.4	0.6	0.8	1.3
R&D transport	70485	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Other	7049	1.5	2.5	3.6	9.9	6.6	10.2	6.0	8.4	11.9
Environmental protection	705	0.8	1.4	1.4	1.2	1.1	1.2	1.9	2.5	2.7
Waste water management	7052	0.004	0.7	0.5	0.1	0.1	0.1	0.2	0.5	0.2
Pollution abatement	7053	0.04	0.04	0.04	0.05	0.04	0.06	0.06	0.05	0.06
Protection of biodiversity and landscape	7054	0.2	0.1	0.2	0.2	0.1	0.08	0.02		0.12
R&D	7055	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.8	0.6
Other	7056	0.5	0.5	0.6	0.8	0.9	0.8	1.2	1.1	1.7
Housing and community amenities	706	4.4	5.2	5.7	7.6	10.8	16.1	21.3	24.6	32.2
Housing development	7061	1.1	0.7	0.9	1.6	1.9	4.5	3.8	6.2	5.9
Water supply	7062	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Street lighting	7063	2.9	4.1	4.4	5.7	8.5	11.1	17.1	17.9	25.7
Health	707	16.3	17.5	21.3	24.4	28.4	30.3	33.6	40.0	52.8
Medical products, appliances, and equipment	7071	0.1	0.1	0.2	0.3	0.3	0.5	0.6	0.5	0.6
Pharmaceutical products	70711	0.1	0.1	0.2	0.3	0.3	0.5	0.6	0.5	
Other medical products	70712	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	
Outpatient services	7072	2.2	2.7	3.1	4.5	4.8	5.0	2.6	8.4	12.7
General medical services	70721	1.5	1.9	2.2	3.5	4.0	3.9	1.1	5.4	8.9
Specialized medical services	70722	0.6	0.7	0.8	0.8	0.7	1.0	1.4	2.9	3.5
Dental services	70723	0.03	0.03	0.03	0.02	0.03	0.04	0.02	0.03	0.03
Paramedical services	70724	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2

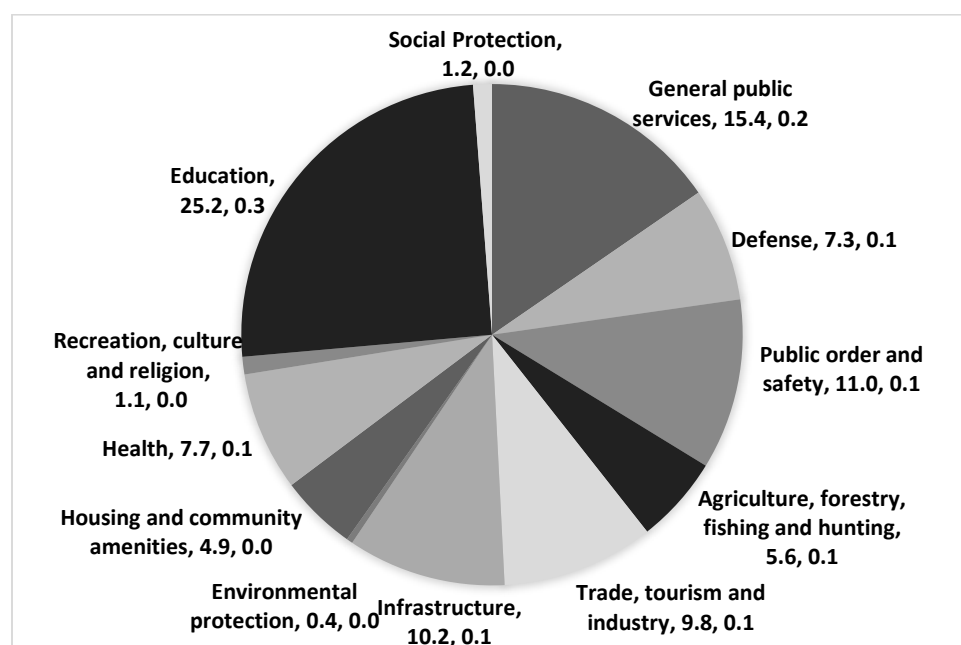
Table 4.4 Continued

Functional classification	COFOG code	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Hospital services	7073	2.8	3.0	3.2	3.6	4.9	4.4	4.7	5.0	5.1
General hospital	70731	2.7	2.9	3.1	3.6	4.8	4.3	4.6	4.9	5.0
Specialized hospital services	70732	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nursing and convalescent home services	70734	0.04	0.04	0.03	0.01	0.06	0.03	0.01	0.01	0.01
Public health services	7074	1.4	1.7	3.5	3.0	3.2	5.4	5.0	3.5	9.1
R&D	7075	0.5	0.9	0.9	0.9	0.9	1.0	1.1	1.1	1.3
Other	7076	9.1	9.2	10.3	12.2	14.3	14.0	19.5	21.4	24.0
Recreation, culture, and religion	708	1.2	1.6	1.9	3.0	4.1	5.9	5.2	6.7	7.8
Recreational and sporting services	7081	0.1	0.2	0.3	0.2	0.3	0.5	0.7	1.1	1.0
Cultural services	7082	0.7	0.8	1.0	1.3	1.7	1.7	1.6	2.2	1.9
Broadcasting and publishing services	7083	0.3	0.3	0.3	1.0	1.6	2.3	2.5	2.7	4.2
Other	7086	0.1	0.2	0.3	0.5	0.5	1.4	0.4	0.7	0.7
Education	709	65.8	75.2	82.4	93.1	107.4	124.8	141.4	159.5	172.8
Preprimary and primary education	7091	2.6	7.3	7.6	6.9	10.7	11.5	12.6	7.7	8.8
Secondary education	7092	1.0	1.4	1.5	2.5	2.3	8.5	0.7	0.8	0.7
Postsecondary nontertiary education	7093	5.0	3.6	4.5	3.3	6.5	7.2	10.8	14.8	14.0
Tertiary education	7094	6.8	7.7	9.8	12.0	12.4	12.5	30.6	33.6	20.6
Education not defined by level	7095	1.6	2.3	1.6	1.3	2.0	1.8	2.7	2.1	20.7
Subsidiary services to education	7096	0.3	1.3	0.7	1.3	1.3	2.0	2.3	1.2	2.4
R&D	7097	0.1	0.2	0.2	0.3	0.6	0.7	0.7	0.7	0.8
Other	7098	48.3	51.4	56.5	65.5	71.6	80.6	81.0	98.5	104.8
Social protection	710	2.8	1.7	4.7	7.5	2.8	4.3	6.9	6.3	8.3
Family and children	7104	0.3	0.4	0.3	0.3	0.5	0.9	2.0	2.8	3.3
Other	7109	2.4	1.3	4.3	7.2	2.3	3.4	4.9	3.5	5.0
Total		196.4	222.8	251.0	311.6	378.7	458.6	535.3	605.3	684.1

Source: Author's calculations.

Note: COFOG= Classification of Functions of Government; R&D = research and development.

Figure 4.2 Central government expenditure by functional classification in 2010/2011, in percentage



Source: Author's calculations.

Compared with simple aggregate based on administrative structure, the functional classification provides a more accurate picture of the appropriation of public resources (Figures 4.1 and 4.2). For instance, expenditure in environmental protection is negligible if expenditures used for environmental protection are separated from expenditures on water supply and instead combined with expenditures on natural resource management in the Ministry of Environment and Mineral Resources. On the other hand, expenditure on education increased by about 25 percent as technical and higher education was moved from the Ministry of Education to the Ministry of Science and Technology in 2005/2006. It is clear that simple aggregate along line ministries is generally not precise enough and can be misleading, especially when the structure of government undergoes frequent changes as in the case of Kenya. It was suggested that poverty reduction expenditures can also be documented manually by extracting relevant expenditure items using the functional classification from the government budget reporting system.

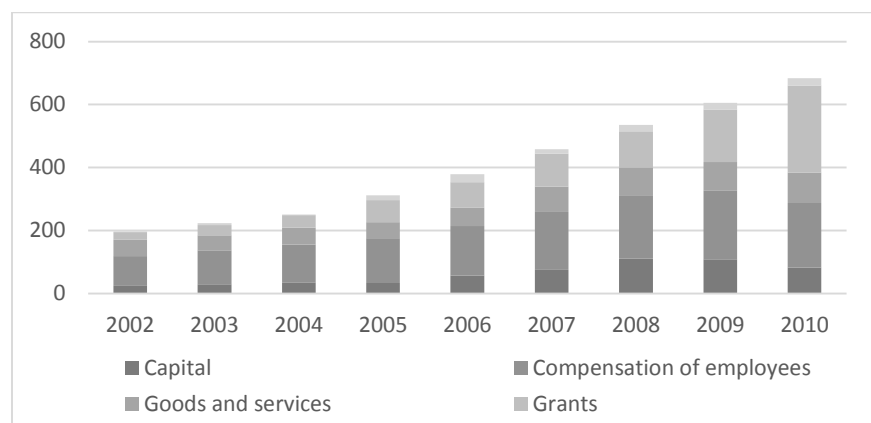
Economic Classification

The third dimension of classification, economic classification, helps reveal the outlay of government expenditure according to the use of funds. Since some types of public spending may not directly create productive capital and may affect productivity indirectly, it is important to distinguish capital investment from current spending. Each transaction record or line item is categorized as an economic classification by the author according to the definition outlined in GFS (IMF 2001), permitting the distinction between capital and noncapital expenditure.² Although central government expenditure had increased

² The original dataset has a mislabeling issue because the same line item could be assigned to different spending types. For example, line item "Construction of buildings" (line code 3110200) was assigned as both a development and a recurrent expenditure. There also are cases in which the expenditure items are actually government revenue from fees and levies, the proceedings from sale of assets, and grants received from other sources, which should be treated as revenue and subsequently excluded from the analysis. The issue was addressed by reassigning each expenditure item according to its economic classification. In addition, it is worth noting that some expenditure items are actually government revenue from fees and levies, proceedings from the sale of assets, and grants received from other sources, which should be treated as revenue and subsequently excluded from the analysis.

substantially, the composition of expenditure by economic classification is still highly skewed toward noncapital items. Capital expenditure remained a small portion of the overall government expenditure, with its share hovering around 12 percent over time (Figure 4.3 and Table 4.5). Although it has increased in level, the share of labor cost has been stable since 2008, explaining about one-third of the central government budget. Another one-quarter of the budget was distributed for the consumption of goods and services. In addition, there has been a marked increase in the share allocated to intergovernment transfers, growing rapidly and representing 40 percent of central government spending in 2010/2011. The expenditure related to education is largely contributions to the Teachers Service Commission, which handles staffing and payroll matters regarding registered teachers employed in the public sector.

Figure 4.3 Central government expenditure by economic classification, in billions of shillings



Source: Author's calculations.

Table 4.5 Government expenditure by economic classification, in billions of shillings

Economic classification	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Capital	12.2	12.8	13.9	10.7	14.9	16.2	20.7	17.9	12.1
Compensation of employees	49.1	49.2	48.4	46.5	42.8	41.1	37.9	36.8	30.5
Wages and salaries	28.7	30.8	31.5	32.0	29.6	28.6	26.6	26.3	20.3
Allowance	19.6	17.6	16.3	13.5	12.1	11.6	10.7	9.7	9.6
Training	0.7	0.7	0.5	0.9	1.1	0.9	0.7	0.7	0.6
Use of goods and services	25.7	20.8	21.0	15.4	14.2	16.7	16.2	14.4	13.6
Goods and services	24.0	18.9	19.4	13.3	12.5	14.4	14.6	12.9	12.3
Travel	1.7	1.9	1.6	2.1	1.7	2.3	1.6	1.5	1.3
Grants	12.3	14.5	15.7	22.6	21.6	22.9	21.5	27.6	40.4
Grants to other government units	12.0	14.2	15.1	21.7	20.8	22.4	20.8	26.6	39.8
Grants	0.3	0.2	0.6	0.8	0.8	0.5	0.8	1.0	0.6
Other	0.8	2.7	1.0	4.9	6.6	3.2	3.7	3.4	3.4
Interest				1.8	5.5	0.0	0.1	0.0	
Social benefits				0.5	0.5	0.3	0.3	0.3	0.3
Subsidies				0.1	0.0	2.1	2.7	2.6	2.7
Other	0.8	2.7	1.0	2.5	0.6	0.8	0.7	0.6	0.5
Total central government	100	100	100	100	100	100	100	100	100

Source: Author's calculations.

The three classifications—administrative, functional, and economic—allow users to further dissect the expenditure data for scrutiny. For example, it is possible to track and compare capital investment by ministry if expenditure data are grouped according to the combination of administrative and economic classifications. There are substantial variations in resource allocation across government agencies (Table 4.6). Labor cost and consumption of goods and services dominate the outlay of several central government agencies including offices of state heads, the Ministry of Education, and the Ministry of Public Health and Sanitation. Capital investment constitutes more than half of the expenditure in ministries related to infrastructure, such as regional development, land management, energy, and public works. On the other hand, a high proportion of intragovernment transfer characterizes the spending pattern of ministries in charge of national development, defense, finance, local government, energy, science and technology, road, building, and industrialization.

Table 4.6 Structure of central government expenditure by administrative and economic classifications in 2010/2011, in percentages

Vote	Capital	Compensation of employees	Of which: Wages and salaries	Allowance	Use of goods and services	Of which: Goods and services	Travel	Grants to other government units	Other grants
Office of the President, Ministry of State for Provincial Administration and Internal Security	9.0	67.0	47.9	18.6	32.3	21.1	2.2	0.6	0.0
State House	29.3	15.2	7.0	7.8	84.8	46.9	8.7		
Ministry of State for Public Service, Directorate of Personnel Management	17.4	36.4	15.6	8.9	45.1	25.0	2.8	6.5	2.0
Ministry of Foreign Affairs	6.3	39.5	17.3	22.1	51.6	30.9	14.5		3.7
Office of the Vice President and Ministry of Home Affairs	12.6	58.5	42.4	15.9	41.5	25.5	3.3		0.0
Ministry of Planning and National Development	7.1	7.2	4.6	1.8	15.3	7.0	1.2	76.9	0.6
Office of the Deputy Prime Minister and Ministry of Finance	8.0	6.6	3.4	1.2	30.0	21.2	0.9	59.9	3.2
Ministry of State for Defence	0.0	1.2	0.8	0.4	0.2	0.2	0.0	98.6	
Ministry of Regional Development	34.9	3.2	2.3	0.8	56.7	21.4	0.4	40.1	
Ministry of Agriculture	3.8	21.9	13.8	7.1	49.1	41.3	4.0	24.4	0.6
Ministry of Health and Medical Services	6.5	48.4	27.0	21.3	19.8	13.1	0.3	31.6	0.1
Office of the Deputy Prime Minister and Ministry of Local Government	21.3	1.2	0.7	0.5	28.6	7.0	0.3	70.2	
Ministry of Roads, Public Works and Housing	0.3	1.8	1.3	0.5	2.5	2.2	0.1	95.7	
Ministry of Transport	31.2	7.9	6.0	1.4	68.9	35.2	2.6	21.1	2.0
Ministry of Labour and Human Resource Development	26.7	35.1	22.0	12.3	62.9	32.3	4.0	1.6	0.3
Office of the Deputy Prime Minister and Ministry of Trade	10.6	22.9	11.2	9.2	43.3	26.4	6.3	25.1	7.3
Ministry of Justice, National Cohesion and Constitutional Affairs	0.5	8.9	4.9	2.8	29.0	26.3	2.2	62.2	0.0
Ministry of Gender, Sports, Culture, Social Services, Children and Social Development	3.0	19.7	12.4	6.1	21.5	15.6	2.9	58.5	0.3
Ministry of Livestock Development	12.6	50.9	34.3	15.9	40.0	24.1	3.3	9.1	0.0
Ministry of Water and Irrigation	58.5	6.7	4.6	1.8	67.3	8.5	0.3	26.0	0.0
Ministry of Environment and Mineral Resources	23.3	27.2	15.8	10.5	53.8	27.8	2.6	17.9	1.2

Table 4.6 Continued

Vote	Capital	Compensation of employees	Of which: Wages and salaries	Allowance	Use of goods and services	Of which: Goods and services	Travel	Grants to other government units	Other grants
Ministry of Cooperative Development and Marketing	7.3	47.7	30.7	15.6	35.9	20.8	7.8	16.5	
Cabinet Office	13.7	28.8	16.8	8.7	56.5	37.8	5.0	14.7	
Ministry of East African Community State Law Office and Office of the Attorney General	2.7	18.2	8.4	6.3	27.6	19.7	5.2		54.2
The Judiciary	12.6	45.8	25.4	15.9	47.4	27.3	7.5	6.6	0.2
Public Service Commission of Kenya	21.5	56.0	36.2	19.7	40.7	14.1	5.1	3.3	
Kenya National Audit Office	4.7	47.7	19.9	18.1	52.1	43.9	3.5		0.2
National Assembly								100.0	
National Assembly	11.4	55.2	18.3	36.5	39.8	20.0	8.4	4.7	0.1
Ministry of Energy	33.2	0.9	0.4	0.3	37.0	3.6	0.2	62.1	
Ministry of Education	2.2	74.3	51.1	23.0	5.1	2.6	0.2	8.2	0.0
Ministry of Information and Communications	8.6	8.6	4.8	3.2	64.9	55.2	1.2	26.1	0.4
Electoral Commission of Kenya	0.8	65.1	54.4	4.6	32.1	28.8	2.6	2.8	
Kenya Anti-Corruption Commission								100.0	
Ministry of State for Special Programmes	15.4	1.8	1.3	0.4	45.6	29.8	0.5	30.9	0.1
Ministry of Lands and Housing	59.7	26.5	17.1	8.9	73.5	12.5	1.2		
Ministry of State for Immigration & Registration of Persons	18.5	34.9	23.3	10.4	64.2	43.2	2.5		0.0
Office of the Vice President and Ministry of State for National Heritage	10.7	10.0	5.9	3.3	26.8	14.4	1.8	63.1	0.1
Ministry of Youth Affairs and Sports	22.0	23.3	14.1	4.8	48.7	22.3	4.4	18.5	0.1
Ministry of Science and Technology	10.8	7.0	4.6	2.2	12.2	1.1	0.3	74.4	4.6
Ministry of Housing	44.6	12.6	6.9	5.0	86.9	40.7	1.5		0.5
National Security Intelligence Service								100.0	
Ministry of Tourism and Wildlife	2.5	6.0	3.3	2.1	22.5	15.5	4.5	70.5	0.2
Office of the Prime Minister	9.7	18.8	7.3	5.9	81.2	61.3	10.1		
Ministry of Public Health and Sanitation	24.0	35.9	24.2	10.7	55.4	30.2	1.2	8.1	0.1
Ministry of Forestry and Wildlife	15.4	4.3	3.1	0.6	28.0	11.5	1.0	67.7	

Table 4.6 Continued

Vote	Capital	Compensation of employees	Of which: Wages and salaries	Allowance	Use of goods and services	Of which: Goods and services	Travel	Grants to other government units	Other grants
Ministry of Fisheries Development	25.0	15.9	7.9	4.1	68.9	39.1	4.8	13.5	1.6
Ministry of Nairobi Metropolitan Development	60.5	12.4	5.6	4.4	87.6	24.3	2.8		0.0
Ministry of Development of Northern Kenya and Other Arid Lands	32.2	19.6	13.3	1.4	57.4	21.4	3.8		
Ministry of Public Works	71.2	16.3	10.4	5.6	83.7	9.9	2.5		
Ministry of Industrialization	30.2	6.7	4.1	2.2	38.8	7.7	1.0	51.5	0.0
Total central government	12.1	30.5	20.3	9.6	25.7	12.3	1.3	39.8	0.6

Source: Author's calculations.

5. AGRICULTURAL EXPENDITURE IN KENYA

Given the essential role of agriculture in development and the growing request to track and monitor agricultural public expenditure, the expenditure of the central government is examined closely to illustrate how to derive public expenditure based on the need of individual users including researchers and policymakers. Having an accurate picture of the volume and patterns of agricultural expenditure improves transparency in the budget, which also contributes to the reduction of rent-seeking behavior and accountability of the Kenyan government. An accurate measurement of agricultural spending also helps provide more reliable linkage between spending and development outcomes like agricultural productivity.

A comparison of annual expenditure data could be problematic as aggregates are based on audited and unaudited appropriations accounts from different sources (GOK 2012). The total expenditure estimated by MOF, IMF, the Food and Agriculture Organization of the United Nations (FAO), and IFPRI exhibited a similar upward trend and are not far apart (Table 5.1). It is not surprising to find identical expenditure figures in IMF and FAO, as both take the numbers reported by the Kenya National Bureau of Statistics (KNBS). In general the total expenditure reported by MOF tends to be the lowest while that reported by IFPRI tends to be the highest. In the case of agricultural expenditure, aggregates based on the author-assigned COFOG code tend to be higher than IMF and FAO reports due to adjustments in code assignment. However, the volume of agricultural expenditure varies substantially depending on the definition of the agricultural sector (Figure 5.1).

Table 5.1 Comparison of central government expenditure by sources, in billions of shillings

Expenditure and source	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Total (central and local)									
IMF	213.8	228.9	289.6	302.2	371.1	433.8	550.7	635.8	717.6
FAO	213.8	228.9	289.6	302.2	371.1	433.8	550.7	635.8	302.2
IFPRI	223.5	245.4	278.7	333.7	407.6	488.3	569.6	641.8	684.1
Total expenditure									
IMF	213.8	228.9	289.6	280.1	355.7	413.7	528.1	610.7	688.8
FAO	213.8	228.9	289.6	280.1	355.7	413.7	528.1	610.7	280.1
MOF	202.6	219.2	249.3	306.8	361.4	428.8	506.0	577.9	630.0
IFPRI	211.1	232.8	260.9	311.6	378.7	458.6	535.3	605.3	684.1
Expenditure on economic affairs									
IMF	33.9	34.6	51.4	41.4	49.5	71.4	96.2	130.8	152.1
FAO	33.9	34.6	51.4	41.4	49.5	71.4	96.2	130.8	41.4
IFPRI	34.8	40.0	45.0	55.9	79.2	106.9	146.9	153.9	176.1
Agriculture, Forestry, Fishing, and Hunting									
IMF	10.7	10.5	12.2	10.9	9.9	14.1	16.8	23.9	31.8
FAO	10.7	10.5	12.2	10.9	9.9	14.1	16.8	23.9	33.7
IFPRI	9.2	11.1	12.0	13.8	19.6	25.6	34.7	34.0	38.6
Agriculture (crops and animal husbandry)									
FAO					9.2	13.2	15.8	20.7	27.8
IFPRI	7.4	9.0	9.2	11.4	16.3	21.4	29.6	26.2	29.5
Forestry									
FAO					0.4	0.6	0.6	2.7	4.1
IFPRI	1.1	1.3	1.4	1.3	1.7	2.2	3.1	4.1	4.6
Fishing and hunting									
FAO					2.4	3.0	3.4	2.5	2.6
IFPRI	0.7	0.9	1.4	1.1	1.6	2.1	2.1	3.6	4.5

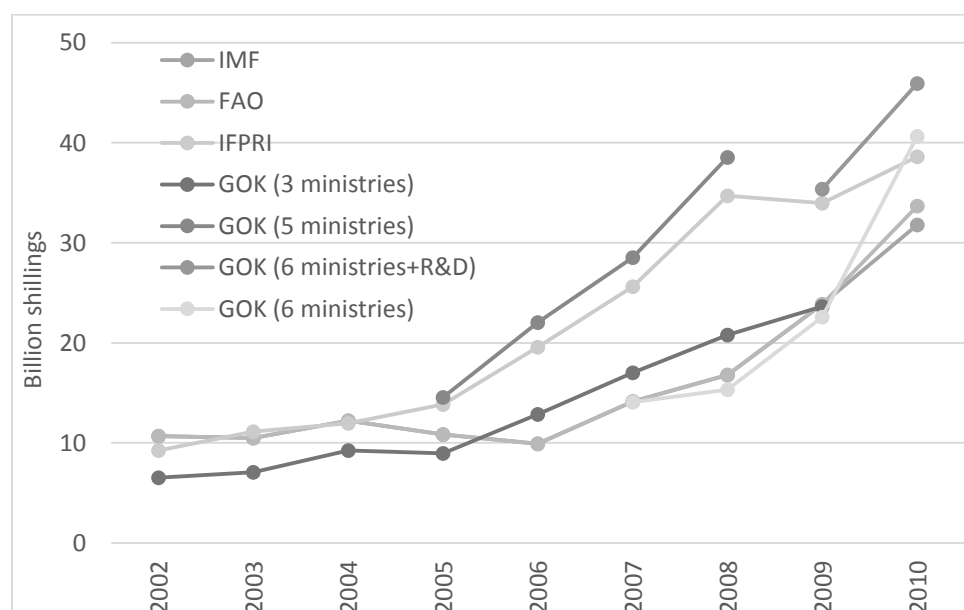
Table 5.1 Continued

Expenditure and source	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
R&D economic affairs									
FAO					2.6	3.3	3.6	3.0	3.2
IFPRI	3.3	3.3	3.3	4.6	5.6	5.8	6.0	8.6	9.5
R&D agriculture, forestry, fishing, and hunting									
FAO					2.4	3.0	3.4	2.5	2.6
IFPRI	3.0	2.9	3.0	4.3	5.0	5.3	5.2	7.6	8.0
Environmental protection									
FAO	1.6	1.4	0.9	0.7	3.8	5.0	6.1	5.6	0.7
IFPRI	0.8	1.4	1.4	1.2	1.1	1.2	1.9	2.5	2.7
Protection of biodiversity and landscape									
FAO					1.7	1.4	3.2	2.5	1.9
IFPRI	0.2	0.1	0.2	0.2	0.1	0.1	0.0		0.1
R&D environmental protection									
FAO					1.4	0.9	1.9	1.1	0.9
IFPRI	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.8	0.6

Source: Author's calculations.

Note: FAO = Food and Agriculture Organization of the United Nations; IFPRI = International Food Policy Research Institute; IMF = International Monetary Fund; MOF = Ministry of Finance; R&D = research and development. IMF refers to the government expenditure reported in government finance statistics by IMF, FAO refers to government expenditure on agriculture and related functions collected through Questionnaire on Government Expenditure on Agriculture and Related Categories, MOF refers to the expenditure reported by the Ministry of Finance, and IFPRI refers to aggregate according to functional classification described in this paper. It was pointed out that the FAO estimates of total expenditure in 2010/2011 are problematic, but no effort was made to re-estimate the number.

Figure 5.1 Comparison of agricultural expenditure



Source: IMF: government finance statistics, FAO: FAO questionnaires, IFPRI: author's own estimation, GOK (3 ministries): Akroyd and Smith (2007), GOK (5 ministries): Budget Strategy Paper (Kenya, MoF 2006), GOK (6 ministries+R&D): ActionAid (2013a), and GOK (6 ministries): ActionAid (2013b).

Note: FAO = Food and Agriculture Organization of the United Nations; GOK = government of Kenya; IFPRI = International Food Policy Research Institute; IMF = International Monetary Fund.

The author determined during communication with KNBS staff that there are potential misclassifications that could compromise the resulting aggregates. For example, expenditures associated with head “veterinary research” were considered either part of agriculture (COFOG code 70421) or part of environmental protection (COFOG code 70560) in the original KNBS COFOG definition. The head was reassigned to “R&D agriculture, forestry, fishing and hunting” (COFOG code 70482) to better reflect the objective of this activity. Similarly, expenditures under head “Kilifi Institute of Agriculture” were relabeled COFOG code 70482 instead of the original functional classification code 70941, “first stage of tertiary education.” This is because the expenditure head fits the definition of agricultural R&D expenditure, “grants, loans or subsidies to support applied research and experimental development related to agriculture, forestry, fishing and hunting undertaken by non-government bodies such as research institutes and universities” (Table A.1). On the flip side, estimates of expenditures on environmental protection using the author-defined functional classification were generally smaller compared with FAO reports, which used the unadjusted COFOG codes (Table 5.1).

Total government spending in the agricultural sector reached 46.6 billion shillings in 2010/2011, which is about 5.6 percent of the total central government budget (Figure 4.3 and Table 4.4). Public agricultural expenditure can be presented according to different types of classification, as demonstrated in Table 5.2. Using administrative classification, multiple ministerial level government agencies are involved in agricultural related activities. The continuous shifting of government organizational structure adds extra difficulty in relying on line ministries to estimate consistent agricultural expenditure. The major agriculture related ministries are the Ministries of Agriculture, Livestock, Fisheries, Forestry, Water and Irrigation, and Education.

Based on functional classification detailed in Table A.3, agricultural expenditure is estimated to be 38.6 billion shillings (Table 5.2), which is 20 percent higher than simple summation across the five main line ministries (agriculture, livestock, fishery, forestry, and cooperative) under administrative classification. The comparison suggests that simple aggregation of selected ministries according to administrative structure could considerably under- or overestimate true agricultural spending by a large margin, as this rough summation neglects many key functions managed by other ministries, including irrigation in the Ministry of Water and Irrigation, land settlement in the Ministry of Lands and Housing, agricultural R&D in the Ministry of Science and Technology, and conservation in the Ministry of Development of Northern Kenya and Other Arid Lands. The continuous shifting of government organizational structure puts additional difficulty in relying on line ministries.

Table 5.2 Structure of central government agricultural expenditure, in billions of shillings

Classification	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
<i>By administrative classification</i>									
Ministry of Agriculture	7.3	5.8	5.2	7.0	10.0	13.6	13.3	12.9	17.1
Ministry of Livestock Development		2.7	2.8	3.0	4.1	4.2	5.1	5.3	6.0
Ministry of Fisheries Development						0.8	0.9	2.6	3.5
Ministry of Tourism and Wildlife			1.0	0.9	1.2				
Ministry of Forestry and Wildlife						4.5	5.3	6.4	7.1
Ministry of Cooperative Development and Marketing	0.5	0.7	1.2	0.6	0.9	1.0	1.0	1.0	1.2
Ministry of Water and Irrigation	0.0	0.3	0.3	0.5	0.9	1.4	1.5	3.3	3.1
Ministry of Environment and Mineral Resources	1.9	2.3	1.8	1.8	2.2				
Ministry of Education	0.6	0.7	0.8	1.2	1.1				

Table 5.2 Continued

Classification	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Ministry of Science and Technology						0.9	1.8	3.2	3.5
Ministry of Lands and Housing	0.6	0.7	0.6	0.5	1.1	0.7	0.9	0.9	1.1
Office of the President, Ministry of State for Provincial Administration and Internal Security	1.2	1.0	1.2	2.6					
Ministry of Planning and National Development	0.1	0.01	0.1	0.1	0.1	0.1	0.2	0.1	0.2
Ministry of Justice, National Cohesion and Constitutional Affairs								0.1	0.7
Ministry of State for Special Programmes					3.0	2.4	8.4	3.7	2.4
Ministry of Regional Development				0.0	0.0	0.0	0.0	0.0	0.0
Ministry of Development of Northern Kenya and Other Arid Lands						1.3	1.6	2.0	0.8
<i>By economic classification</i>									
Capital	0.9	1.6	2.2	3.0	5.1	8.5	12.2	10.1	6.9
Compensation of employees	4.5	4.5	5.2	5.6	6.6	7.4	7.2	8.1	9.0
Goods and services	4.5	4.5	4.9	3.3	5.3	6.3	10.1	10.1	15.4
Grants	2.3	3.2	2.3	5.8	7.4	8.4	10.3	12.9	14.6
Other	0.1	0.2	0.3	0.3	0.1	0.3	0.1	0.3	0.7
<i>By functional classification</i>	12.3	14.1	15.0	18.1	24.6	30.9	39.9	41.6	46.6
Agriculture, forestry, fishing, and hunting	9.2	11.1	12.0	13.8	19.6	25.6	34.7	34.0	38.6
Agriculture	7.4	9.0	9.2	11.4	16.3	21.4	29.6	26.2	29.5
Forestry	1.1	1.3	1.4	1.3	1.7	2.2	3.1	4.1	4.6
Fishing and hunting	0.7	0.9	1.4	1.1	1.6	2.1	2.1	3.6	4.5
R&D agriculture, forestry, fishing, and hunting	3.0	2.9	3.0	4.3	5.0	5.3	5.2	7.6	8.0
<i>By subfunctions</i>									
Administration	2.1	3.9	3.6	2.9	4.9	5.5	6.8	10.9	12.5
Conservation	1.2	1.4	2.6	2.2	2.8	3.9	3.6	4.0	2.8
Extension	2.8	2.9	3.2	4.2	5.5	6.5	6.9	6.2	8.4
Flood and irrigation	0.3	0.3	0.3	0.5	0.9	1.6	1.9	3.3	3.2
Food security	0.9	0.5	0.0	1.7	2.0	4.6	8.1	3.9	2.5
Land settlement	0.6	0.7	0.6	0.5	1.1	0.7	0.9	1.1	1.7
Marketing	0.1	0.0	0.0	0.0	0.1	0.3	3.1	1.7	3.9
Pest control	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1
Research	3.0	2.9	3.0	4.3	5.0	5.3	5.2	7.6	8.0
Veterinary services	0.9	1.4	1.5	1.7	2.3	2.6	3.4	3.0	3.5

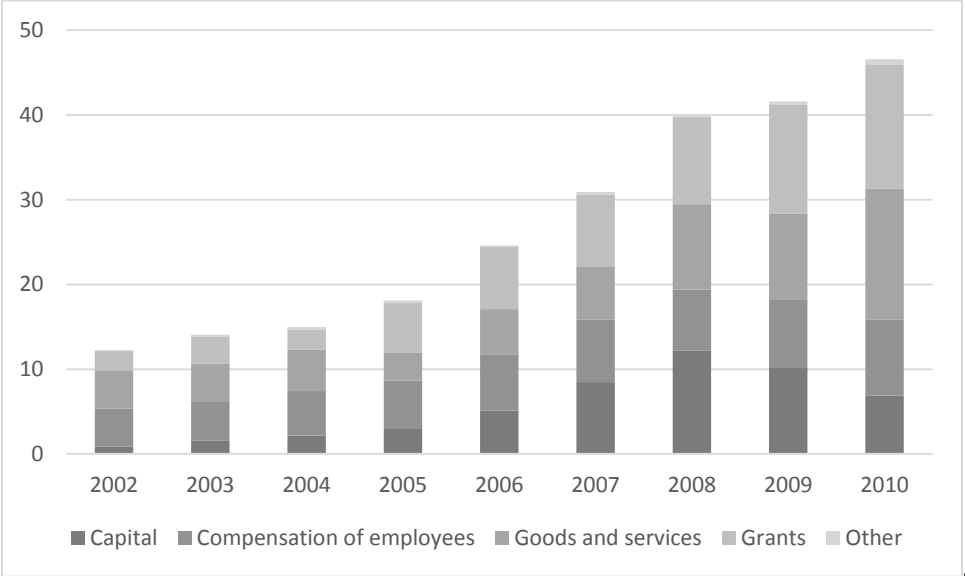
Source: Author's calculations.

Note: R&D = research and development.

Within the agricultural sector, expenditure can be further disaggregated in user defined categories like functions. The big-ticket agricultural functions are administration, research, and extension. Many projects aimed at enhancing food security through increased productivity fall under the classification of extension, most sponsored by international development partners. Combined with veterinary service, the extended definition of extension accounts for about a quarter of agricultural outlay. Expenditure in agricultural R&D is much larger than what was reported to FAO because the author-defined COFOG code covers spending on agricultural research institutes and research carried by universities, mainly Kenya Agricultural Research Institute and Jomo Kenyatta University of Agriculture and Technology. Despite their key role in improving productivity and mitigating the impact of climate change, irrigation and flood control made up only a small portion of total agricultural expenditure. Rural development is also an important aspect of government investment to improve agricultural productivity and rural service delivery through investment in electricity, rural health, and rural cultural services. Expenditure earmarked for rural development was 14.7 shillings in 2010/2011, about 2 percent of total national expenditure. Although classified under agricultural spending, expenditure on food security fluctuated vastly, implying it is more a response to an emergency food requirement than a steady investment to increase food security.

The economic classification in Figure 5.2 illustrated that the composition of agricultural expenditure is different from the overall expenditure in Figure 4.3. The agricultural sector usually reported higher expenditure share for capital spending (as high as 30 percent in 2008/2009) and shifted resources from employee compensation to the procurement of goods and services. The agricultural sector is also less dependent on intergovernment transfer.

Figure 5.2 Central government agricultural expenditure by economic classification, in billions of shillings



Source: Author's calculations.

Furthermore, we can inspect the distribution of agricultural expenditure by a combination of classifications. Table 5.3 provides an example of a cross-table of expenditure under functional and economic classifications associated with agricultural and rural development. In spite of a relatively high allocation of capital spending compared with the whole central government, investment in capital assets remained low across different functions of agriculture as capital spending accounted for less than half of functional spending in many cases. It implies that the long-term growth potential of the agricultural sector could be compromised as the majority of resources are allotted to labor cost and consumption.

Table 5.3 Agricultural expenditure by functional and economic classification in 2010/2011, in billions of shillings

Classification	Capital	Compensation of employees	Goods and services	Grants	Total	Share of capital in total expenditure (%)
<i>By functional classification</i>						
Agriculture, forestry, fishing, and hunting	9.4	8.1	9.0	7.2	34.0	27.7
Agriculture	7.8	7.3	7.2	3.7	26.3	29.6
Forestry	0.7	0.5	1.0	3.4	5.6	13.1
Fishing and hunting	0.9	0.4	0.8	0.0	2.1	42.8
R&D agriculture, forestry, fishing, and hunting	0.7	0.1	1.1	5.7	7.6	9.4
<i>By subfunctions</i>						
Administration	1.8	1.8	3.2	4.1	10.9	16.6
Conservation	1.0	0.4	1.0	1.2	4.0	25.7
Extension	0.4	3.3	1.7	0.8	6.2	6.2
Flood and irrigation	2.4	0.2	0.1	0.6	3.3	73.1
Food security	3.5		0.3	0.2	3.9	88.0
Land settlement	0.2	0.6	0.1	0.1	1.1	20.3
Marketing	0.0	0.1	1.6		1.7	0.1
Pest control				0.0	0.0	0.0
Research	0.7	0.1	1.1	5.7	7.6	9.4
Veterinary services	0.1	1.8	1.0	0.0	3.0	4.2

Source: Author's calculations.

Note: R&D = research and development.

Agricultural management and operation received a healthy flow of capital in 2010, but capital investment in agricultural R&D is far from enough. Investment in capital remained low across different functions of agriculture as capital spending remained a small portion of agricultural spending in many cases. For example, the majority of resources allocated to extension was used to cover employee compensation and purchase goods and services, revealing a low priority for long-term impact since few resources were set aside for capital assets. Flood control and irrigation is one bright spot where half of the functional spending was devoted to capital construction.

The distribution of agricultural input subsidies is mainly through the Nation Accelerated Agricultural Input Access Programme, which was launched in 2007. This program provides improved seeds and fertilizers to smallholder farmers and also guarantees easy access to credit at low interest rates (ActionAid 2013a). GOK, the World Bank, and the European Union are the major sources of funding, accounting for about 4 billion shillings in 2012. However, this program is not captured by the head in the administrative classification, so it is impossible to extract the information directly from this dataset.

6. CONCLUSION

It is difficult to make comprehensive and reliable comparisons of agricultural expenditures across countries and time, partly due to the data challenges in the definition of the agricultural sector and different levels of disaggregation. For most users agricultural expenditure remains a black box, and it is not clear what government functions are included and whether information about key functions like agricultural R&D and irrigation can be readily available.

Using Kenya as a case study, this paper tries to unpack the black box and establish a transparent and flexible system to map the link between the countries' government finance statistic systems that record detailed public spending data and spending categories defined by international standards and users' own needs. This exercise helps develop a framework of the public expenditure coding system to monitor, track, and improve the metrics on public spending, both in volume and in composition, which supports the assessment of the progress and alignment of public resources with development goals and national strategies. It provides a refined and standardized tool to enable customized and consistent aggregation and support meaningful measurement and comparison across countries and time at different levels of aggregation in a timely manner. In the long run, the establishment of a well-defined expenditure coding system together with a flexible aggregation model or program will not only allow routine assessment of public resource allocation but contribute to the evidence-based policymaking process by linking budgets to development priorities and policy objectives of the government.

The paper illustrates that government expenditure can be organized in different classifications: administrative, functional, and economic. The three classifications are independent of each other, and each focuses on a different aspect of public spending. The Kenya Expenditure Database has detailed and comprehensive administrative and economic classifications but lacks the functional classification, which could compromise understanding of government expenditure. This study illustrates how to define functional classification and generate historical trends regardless of administrative structure change. It provides a useful approach to extracting data flexibly to summarize government expenditure by different classifications or classification combinations according to the user's unique demand. For example, public spending in agriculture increased steadily from 2002/2003 to 2010/2011, reaching about 7 percent of the total state budget.

The exercise suggests that agricultural expenditure goes beyond line ministries and that simple aggregates based on government administrative structure can be misleading. First, the government organization could change, and certain functions might be shifted to different ministries. Second, the mapping relationship between government agencies and functions is not necessarily one to one. It is possible for one ministry to be in charge of several functions and for one function to be managed by several line ministries. It was also noticed that aggregates from different sources could vary substantially due to the definition, audit status of appropriations accounts, and reporting agency. These findings underscore the importance of transparency in the definition and estimation of government expenditure.

Moreover, the widely used term "development expenditure" is not necessarily synonymous with "capital expenditure." Unlike the repeated nature of recurrent expenditure, development expenditure refers to one-off expenditure on new programs and activities, and it is largely funded by international development partners. The distinction between the two is not very clear, and development expenditure could overcount capital expenditure because development expenditure also funds expenditures that are essentially recurring (World Bank 2005; KEPCO 2010). It was estimated that about 60 percent of the development budget is capital expenditure and the remaining 40 percent is in fact recurrent expenditure (GOK 2012). The serious flaws in the definition of the type of budget (development vs. recurrent expenditure) suggest that some of the variables in the raw data have to be scrutinized and cross-validated before any analysis can be performed. In addition, the accounts are based on project-level consolidation of expenditure by economic classification, making it difficult to distinguish actual transactions among different government units. For example, the large amount of intragovernment expenditure is recorded as

“current grant to government agencies and other levels of government,” preventing users from disaggregating the transfers according to recipient agencies.

Last, Kenya’s experience in providing public access to key fiscal information can be spread to other countries. Key fiscal information can be accessed openly through government websites, the government printer’s shop in central Nairobi, or direct contact with government entities. However, data quality is still an issue as the expenditure record had to be cleaned and codes corrected. Countries need to make sure that the data meet a minimal level of quality to ensure direct usability and comparability across countries.

APPENDIX: SUPPLEMENTARY TABLES

Table A.1 Classification of Functions of Government classification of function related to agriculture

704 Economic affairs

7042 Agriculture, forestry, and fishing and hunting

70421 Agriculture

—Administration of agricultural affairs and services; conservation, reclamation, or expansion of arable land; agrarian reform and land settlement; supervision and regulation of the agricultural industry

—Construction or operation of flood control, irrigation, and drainage systems, including grants, loans, or subsidies for such works

—Operation or support of programs or schemes to stabilize or improve farm prices and farm incomes; operation or support of extension services or veterinary services to farmers, pest control services, crop inspection services, and crop grading services

—Production and dissemination of general information, technical documentation, and statistics on agricultural affairs and services

—Compensation, grants, loans, or subsidies to farmers in connection with agricultural activities, including payments for restricting or encouraging output of a particular crop or for allowing land to remain uncultivated

Excludes multipurpose development projects (70474).

70422 Forestry

—Administration of forestry affairs and services; conservation, extension, and rationalized exploitation of forest reserves; supervision and regulation of forest operations and issuance of tree-felling licenses

—Operation or support of reforestation work, pest and disease control, forest fire-fighting and fire prevention services, and extension services to forest operators

—Production and dissemination of general information, technical documentation, and statistics on forestry affairs and services

—Grants, loans, or subsidies to support commercial forest activities

Includes forest crops in addition to timber.

70423 Fishing and hunting

This class covers both commercial fishing and hunting and fishing and hunting for sport.

—Administration of fishing and hunting affairs and services; protection, propagation, and rationalized exploitation of fish and wildlife stocks; supervision and regulation of freshwater fishing, coastal fishing, ocean fishing, fish farming, wildlife hunting, and issuance of fishing and hunting licenses

—Operation or support of fish hatcheries, extension services, stocking or culling activities, and so on

—Production and dissemination of general information, technical documentation, and statistics on fishing and hunting affairs and services

—Grants, loans, or subsidies to support commercial fishing and hunting activities, including the construction or operation of fish hatcheries

Excludes control of offshore and ocean fishing (70310); administration, operation, or support of natural parks and reserves (70540)

7048 R&D economic affairs

70482 R&D agriculture, forestry, fishing, and hunting

—Administration and operation of government agencies engaged in applied research and experimental development related to agriculture, forestry, fishing, and hunting

—Grants, loans, or subsidies to support applied research and experimental development related to agriculture, forestry, fishing, and hunting undertaken by nongovernment bodies such as research institutes and universities

Excludes basic research (70140).

Source: International Monetary Fund (2001).

Note: R&D = research and development.

Table A.2 List of vote and subvote

Vote code	Vote	Subvote code	Subvote
01		010	General administration and planning
01		011	Field administration services
01	Office of the President, Ministry of State for Provincial Administration and Internal Security	012	Administration police services
01		013	Government press
01		016	Immigration
01		017	Police department
01		019	General service unit
02			020
02	State House	021	Presidential press unit
02		024	Policy analysis and research
03	Ministry of State for Public Service, Directorate of Personnel Management	030	General administration and planning
03		031	Training
04	Ministry of Foreign Affairs	040	General administration and planning
04		041	Diplomatic representation
04		042	International organisation
04		043	Coordination and liaison services
05	Office of the Vice President and Ministry of Home Affairs	050	General administration and planning
05		051	National youth service
05		052	National archives
05		053	Prisons service
05		054	Children's services
05		055	Probation and aftercare services
05		056	Culture and social services
05		057	Betting control and licencing
05	058	Immigration	
06	Ministry of Planning and National Development	060	General administration and planning
06		061	Planning and development services
06		062	Statistical services
07	Office of the Deputy Prime Minister and Ministry of Finance	070	General administration and planning
07		071	Financial services
07		075	Centralized services
07		076	Government investment
07		077	Investment regulatory services
08	Ministry of State for Defence	080	
08		081	
09	Ministry of Regional Development	090	General administration and planning
09		091	Office of the vice president
09		093	Regional development

Table A.2 Continued

Vote code	Vote	Subvote code	Subvote
10	Ministry of Agriculture	100	General administration and planning
10		101	Policy, legal reviews and regulation of agricultural inputs and outputs
10		102	Monitoring and management of food security
10		103	Facilitation and supply of agriculture extension services
10		104	Information management for agriculture sector
10		105	Protection of natural resources base for agriculture
10		106	Crop and pest control
10		107	Protection of natural resources base for agriculture
11	Ministry of Health and Medical Services	110	General administration and planning
11		111	Curative health
11		112	Preventive medicine and promotive health
11		113	Rural health services
11		114	Health training and research
11		116	Medical supplies coordination units
11		117	Kenyatta national hospital
11		118	MOI referral and teaching hospital
12	Office of the Deputy Prime Minister and Ministry of Local Government	120	General administration and planning
12		122	Contributions in lieu of rates
12		125	Development schemes
13	Ministry of Roads, Public Works and Housing	130	General administration and planning
13		132	Buildings and works
13		133	Other services
13		134	Housing development
13		136	Roads
14	Ministry of Transport	140	General administration and planning
14		141	Information and news services
14		144	Railways
14		148	Road transport
15	Ministry of Labour and Human Resource Development	150	General administration and planning
15		151	Industrial relations
15		152	Directorate of occupational health and safety services
15		153	Human resource planning and development
15		154	Department of micro and small scale enterprises
15		155	Department of industrial and vocational training
15		156	Department of adult education
16	Office of the Deputy Prime Minister and Ministry of Trade	160	General administration and planning
16		162	Regional co-operation
16		163	Kenya industrial research
16		165	Export development and promotion
16		166	Internal and external trade services
16		167	Small scale industries field services
16		168	Small scale industries field services

Table A.2 Continued

Vote code	Vote	Subvote code	Subvote
17	Ministry of Justice, National Cohesion and Constitutional Affairs	170	General administration and planning
17		171	Legal affairs
17		172	Legal training
18	Ministry of Gender, Sports, Culture, Social Services, Children and Social Development	180	General administrative services
18		181	Culture and social services
18		182	Culture and social services
18		183	Department of adult education
18		184	Department of sports
18		186	Gender and social services
18		187	Children's services
18		188	Kenya library services
18		189	Department of sports
19		Ministry of Livestock Development	190
19	191		Livestock development
19	192		Fisheries development
19	193		Veterinary services
20	Ministry of Water and Irrigation	200	General administration and planning
20		205	National water conservation and pipeline
20		207	Rural urban special water programmes
20		208	Flood control and land reclamation
20		209	National water conservation and pipeline
21	Ministry of Environment and Mineral Resources	210	General administration and planning
21		211	Forestry development
21		212	Mineral development
21		213	Wildlife service
21		214	Department of resource surveys and remote sensing
21		215	Environmental management and protection
21		216	Meteorological services
21		217	
21	218	Water professional services	
22	Ministry of Cooperative Development and Marketing	220	General administration and planning
22		221	Co-operative management
22		223	Training and development
23	Cabinet Office	230	General administration and planning
23		232	Inspectorate and monitoring services
23		234	Advisory services
23		236	Coordination and liaison services
24	Ministry of East African Community	240	General administration
24		241	Regional co-operation
24		242	Inter-governmental authority on development (IGAD)

Table A.2 Continued

Vote code	Vote	Subvote code	Subvote
25		250	General administration and planning
25	State Law Office and Office of the Attorney General	251	Legal services
25		252	Registrar-general's department
25		253	Legal training
25		254	Administrator general's department
26	The Judiciary	260	Judicial services
27	Public Service Commission of Kenya	270	Headquarters
28	Kenya National Audit Office	280	Audit services
28		281	Audit services corporations
29	National Assembly	290	National assembly
30	Ministry of Energy	300	General administration and planning
30		301	Renewable energy development
30		302	Electrical power development
30		303	Petroleum exploration and substitution
31	Ministry of Education	310	General administration and planning
31		311	Basic education
31		312	Quality assurance and standards
31		313	Secondary and tertiary education
31		314	Policy and planning
31		315	Department of adult education
31		316	Secondary education
31		317	Technical education
31		318	University education
32	Ministry of Information and Communications	320	General administration and planning
32		322	Information and news services
32		323	Training
32		325	Film production department
33	Electoral Commission of Kenya	330	General administration and planning
33		331	Field services
34	Kenya Anti-Corruption Commission	340	General administration and planning
35	Ministry of State for Special Programmes	350	General administration and planning
36	Ministry of Lands and Housing	360	General administration and planning
36		362	Land adjudication and settlement
36		363	Survey of Kenya
36		364	Land adjudication and settlement
36		365	Government housing section
36		367	Physical planning
36		368	Housing development
36		369	Other services

Table A.2 Continued

Vote code	Vote	Subvote code	Subvote
40	Ministry of State for Immigration & Registration of Persons	400	General administration and planning
40		401	Field registration services
40		402	Immigration
41	Office of the Vice President and Ministry of State for National Heritage	410	General administration and planning
41		411	Kenya national archives and documentation service
41		412	Non-governmental organisation coordination board
41		413	National museums of Kenya
41		414	National cultural services
41		415	Kenya library services
42	Ministry of Youth Affairs and Sports	420	General administration and planning
42		421	National youth service
42		422	Youth development and training
42		423	Department of sports
43	Ministry of Science and Technology	430	General administration and planning
43		431	Technical education
43		432	National council for science and technology
43		435	University education
43		437	Higher education
44	Ministry of Housing	440	General administration and planning
44		441	Government housing section
44		442	Housing development
45	National Security Intelligence Service	450	General administration and planning
46	Ministry of Tourism and Wildlife	460	General administration and planning
46		461	Tourism services
46		462	Information and news services
46		463	Training
46		464	Wildlife service
46		465	Film production department
48	Office of the Prime Minister	480	General administration and planning
48		481	Inspectorate and monitoring services
48		482	Coordination and liaison services
49	Ministry of Public Health and Sanitation	490	General administration and planning
49		491	Preventive medicine and promotive health
49		492	Disease control services
49		494	Primary health services
49		495	Technical support services
51	Pensions and Gratuities (CFS)	511	Ordinary pension
51		512	Commutated pension
51		513	Other pension schemes
55	Ministry of Forestry and Wildlife	550	General administration and planning
55		551	Wildlife service
55		552	Forestry development

Table A.2 Continued

Vote code	Vote	Subvote code	Subvote
56	Ministry of Fisheries Development	560	General administration and planning
56		561	Fisheries development
57	Ministry of Nairobi Metropolitan Development	570	General administration and planning
58	Ministry of Development of Northern Kenya and Other Arid Lands	580	General administration and planning
59	Ministry of Public Works	590	General administration and planning
59		591	Buildings and works
59		592	Other services
60	Ministry of Industrialization	600	General administration and planning
60		601	Kenya industrial research
60		602	Industrial training services
60		603	Small scale industries field services
60		604	Export development and promotion
60		605	Industrial and business standards
61	Interim Independent Boundaries Review Commission	610	General administration and planning

Source: Author's compilation.

Table A.3 Mapping between head code and COFOG functional classification in Ministry of Agriculture, Ministry of Livestock Development, and Ministry of Fisheries Development

Head code	Head	COFOG code	Function
183	State corporations unit	70421	Administration
185	Finance and procurement services	70421	Administration
190	Headquarters administrative and technical services	70421	Administration
191	Agricultural attaches' offices	70421	Administration
193	Development planning services	70421	Administration
195	Agricultural boards and committees services	70421	Administration
198	Policy and agricultural development coordination services	70421	Administration
202	Agricultural department headquarters	70421	Administration
228	Finance and accounts department	70421	Administration
247	Land development and machinery services	70421	Administration
257	Agricultural information centre	70421	Administration
263	Agricultural department headquarters	70421	Administration
280	Headquarters livestock production support services	70421	Administration
324	Holding grounds services	70421	Administration
407	Animal production farms	70421	Administration
445	Meat inspectorate	70421	Administration
474	Livestock information services	70421	Administration
504	Western Kenya district based agriculture	70421	Administration
508	Grain storage and handling	70421	Administration
596	Kenya plant health inspectorate service (KEPHIS)	70421	Administration
631	Project development monitoring and evaluation	70421	Administration
640	Headquarters administrative and technical services	70421	Administration
641	Development planning services	70421	Administration
192	Headquarters and administration services	70423	Administration
438	Directorate of marine and coastal fisheries	70423	Administration
441	Directorate of inland and riverine fisheries	70423	Administration
450	Finance, accounts and procurement services	70423	Administration
532	Fisheries	70423	Administration
539	Fisheries regional centres	70423	Administration
548	Deep sea fisheries	70423	Administration
451	Range management and improvement	70421	Conservation
533	Resource management national programme	70421	Conservation
180	Small scale horticulture development project	70421	Extension
224	Provincial livestock production services	70421	Extension
225	Central Kenya dry areas and smallholder community	70421	Extension
229	Agriculture technology development and testing stations	70421	Extension
235	Headquarters land and crop development services	70421	Extension
236	Provincial animal production services	70421	Extension
237	Horticultural crop development services	70421	Extension
238	Horticultural crops development authority (HCDA)	70421	Extension
241	Integrated agricultural development programme	70421	Extension
246	National agriculture and livestock extension programme	70421	Extension
255	Extension research liaison and technical building	70421	Extension
260	Farmers training centres	70421	Extension
266	Livestock improvement stations	70421	Extension

Table A.3 Continued

Head code	Head	COFOG code	Function
271	Nation extension project	70421	Extension
291	Lenana national bee keeping station	70421	Extension
408	Rural dairy services	70421	Extension
424	Kenya dairy development programme	70421	Extension
425	National poultry development services	70421	Extension
462	Livestock training - support services	70421	Extension
463	Pastoral areas training centre - Narok	70421	Extension
465	Grift pastoral training centre	70421	Extension
466	Mobile pastoral training unit	70421	Extension
467	Ahiti - Ndomba	70421	Extension
468	Ahiti - Nyahururu	70421	Extension
471	Ahiti - Kabete	70421	Extension
472	Meat training institute - Athi river	70421	Extension
473	Dairy training school - Naivasha	70421	Extension
477	District livestock education and extension service	70421	Extension
478	Livestock breeding and laboratory services	70421	Extension
513	District pig production expenses	70421	Extension
638	Provincial agricultural extension services	70421	Extension
639	District agricultural extension services	70421	Extension
661	District horticultural crop production services	70421	Extension
699	Research extension liaison	70421	Extension
946	Kenya agricultural productivity and agribusiness project (KAPAP)	70421	Extension
947	Eastern Africa agricultural productivity project (EAAPP)	70421	Extension
534	Fisheries stations	70423	Extension
250	Irrigation and land reclamation	70421	Flood and irrigation
995	National irrigation board	70421	Flood and irrigation
996	Bura irrigation scheme	70421	Flood and irrigation
502	Food security and management programme ' <i>Njaa Marufuku Kenya</i> '	70421	Food security
564	National food security	70421	Food security
254	Agricultural, business, market development and agricultural information services	70421	Marketing
305	Provincial livestock marketing services	70421	Marketing
306	District livestock marketing services	70421	Marketing
452	Directorate of quality assurance and marketing	70423	Marketing
230	Pesticide control products board (PCPB)	70421	Pest control
233	Crop protection services	70421	Pest control
448	Disease and pest control services	70421	Pest control
258	Embu Agricultural College	70482	Research
259	Bukura Agricultural College	70482	Research
261	Kilifi Institute of Agriculture	70482	Research
537	Fisheries, research, and hatchery stations	70482	Research
642	Kenya Trypanosomiasis Research Institute	70482	Research
645	Kenya Marine Fisheries Research Institute	70482	Research
759	Kenya Agricultural Research Institute	70482	Research
760	Soil and water management research	70482	Research
761	National crops and horticultural research project	70482	Research

Table A.3 Continued

Head code	Head	COFOG code	Function
763	Veterinary research	70482	Research
764	Range and arid land research	70482	Research
765	Animal production research	70482	Research
232	District livestock production services	70421	Veterinary services
265	District animal production services	70421	Veterinary services
286	Headquarters veterinary services	70421	Veterinary services
290	Artificial insemination services	70421	Veterinary services
426	Tick control programme	70421	Veterinary services
431	Provincial veterinary services	70421	Veterinary services
432	District veterinary services	70421	Veterinary services
437	Veterinary clinical services	70421	Veterinary services
446	Hides and skins improvement	70421	Veterinary services
447	Tsetse control services	70421	Veterinary services
448	Disease and pest control services	70421	Veterinary services
481	Veterinary investigation laboratory services	70421	Veterinary services
490	Veterinary farms development	70421	Veterinary services
491	Asal based livestock and rural livelihoods support	70421	Veterinary services
543	District apicultural services	70421	Veterinary services
549	Central veterinary laboratory services - <i>kabete</i>	70421	Veterinary services
551	Foot and mouth disease	70421	Veterinary services
552	Pastoral areas veterinary services	70421	Veterinary services
553	Rabies control	70421	Veterinary services
597	Lake Victoria environmental management project (LVEMP)	70540	Multi-purpose
698	Lake Victoria environment management project	70540	Multi-purpose
454	Aids control unit	70740	Multi-purpose

Source: Author's own definition.

Note: COFG = Classification of Functions of Government.

REFERENCES

- ActionAid. 2013a. *PFA Report Public Spending in Agriculture in Kenya: Is It Beneficial to Small Scale Women Farmers?* Nairobi: ActionAid International Kenya.
- . 2013b. *Walking the Talk: Why and How African Governments Should Transform Their Agriculture Spending.* Nairobi: ActionAid International Kenya.
- Akroyd, S., and L. Smith. 2007. *Review of Public Spending to Agriculture. A Joint DFID/World Bank study.* Oxford Policy Management. Accessed June 15 2014.
<http://www1.worldbank.org/publicsector/pe/pfma07/OPMReview.pdf>.
- Benin, S. and B. Yu. 2013. *Complying the Maputo Declaration Target: Trends in Public Agricultural Expenditures and Implications for Pursuit of Optimal Allocation of Public Agricultural Spending.* ReSAKSS Annual Trends and Outlook Report 2012. Washington, DC: International Food Policy Research Institute.
- Cooper, J., and S. Pattanayak. 2011. *Chart of Accounts: A Critical Element of the Public Financial Management Framework.* Technical notes and manuals. Washington, DC: International Monetary Fund.
- GOK (Government of Kenya). 1997. *The Constitution of Kenya (Amendment).* Nairobi, Kenya.
- . 1998. *Local Government Act. Chapter 265.* Nairobi, Kenya.
- . 2003a. *The Public Audit Act 2003. Act No. 12 of 2003.* Nairobi, Kenya.
- . 2003b. *The Constituencies Development Fund.* Nairobi, Kenya.
- . 2004. *Financial Management Act 2004 (Amendment). Act No. 43 of 2004.* Nairobi, Kenya.
- . 2005. *The Public Procurement and Disposal Act. Act No. 3 of 2005.* Nairobi, Kenya.
- . 2010. *The Constitution of Kenya.* Nairobi, Kenya.
- IMF (International Monetary Fund). 2001. *Government Finance Statistics Manual 2001.* Washington, DC.
- Jacobs, D., J. Hélias, and D. Bouley. 2009. *Budget Classification. Technical Notes and Manuals.* Washington, DC: International Monetary Fund.
- Kenya, MDP (Ministry of Devolution and Planning). 2013. *Comprehensive Public Expenditure Review: Eye on Budget Spending for Results.* Nairobi, Kenya: Monitoring and Evaluation Directorate.
- Kenya, MoF (Ministry of Finance). 2006. *Budget Strategy Paper.* Nairobi, Kenya.
- Kenya, MSPNDV (Ministry of State for Planning, National Development and Vision 2030). 2010. *Public Expenditure Review: Policy for Prosperity.* Nairobi, Kenya.
- Kenya Open Data. “Kenya Expenditure Database.” Accessed February 2014. <https://opendata.go.ke/>.
- KEPCO (The Kenya Producers Coalition). 2010. *Resource Allocation and Utilization in Kenya’s Agricultural Sector: A Public Expenditure Review.* Nairobi.
<ftp://ftp.fao.org/TC/CPF/Countries/Kenya/Resource%20Allocation-Kenya%202010.pdf>.
- Mogues, T., B. Yu, S. Fan, and L. McBride. 2012. *The Impacts of Public Investment in and for Agriculture.* Discussion Paper 01217. Washington, DC: International Food Policy Research Institute.
- PEFA (Public Expenditure and Financial Accountability). 2006. *Public Financial Management Performance Report and Performance Indicators: PEFA Evaluation.* Accessed June 15 2014.
<http://www.pefa.org/en/assessment/ke-jul06-pfmpr-public-en>.
- . 2009. *PEFA Public Financial Management Performance Assessment Report for Kenya. The European Union’s EDF Programme Project No. 9, FED GPR 15/25.* Nairobi, Kenya. Accessed June 15 2014.
http://eeas.europa.eu/delegations/kenya/documents/more_info/pefa2008_kenya_final_report.pdf
- . 2010. *Local Government Act, Chapter 265 (Revised).* Accessed June 15 2014.
<http://www.pefa.org/en/assessment/ke-mar09-pfmpr-public-en>.

- . 2012. Public Expenditure and Financial Accountability (PEFA) Assessment. Accessed June 15 2014. <http://www.pefa.org/en/assessment/ke-aug12-pfimpr-public-en>.
- Shah, A. 2004. *Fiscal Decentralization in Developing and Transition Economies: Progress, Problems and the Promise*. Policy Research Working Paper No. 3282. Washington, DC: World Bank.
- World Bank. 2005. Kenya Public Expenditure Review 2004: Report on the Structure and Management of Public Spending. Report No. 29421-KE. Washington, DC.

RECENT IFPRI DISCUSSION PAPERS

For earlier discussion papers, please go to www.ifpri.org/pubs/pubs.htm#dp.
All discussion papers can be downloaded free of charge.

1395. *Analysis of agricultural public expenditures in Nigeria: Examination at the federal, state, and local government levels.* Aderibigbe Olomola, Tewodaj Mogues, Tolulope Olofinbiyi, Chinedum Nwoko, Edet Udoh, Reuben Alabi, Justice Onu, Sileshi Woldeyohannes, 2014.
1394. *International rice trade and security stocks: Prospects for an expanded Asian international rice reserve.* Paul A. Dorosh and Abigail Childs, 2014.
1393. *The US agricultural act of 2014: Overview and analysis.* Carl Zulauf and David Orden, 2014.
1392. *The changing landscape of agriculture in Ghana: Drivers of farm mechanization and its impacts on cropland expansion and intensification.* Nazaire Houssou and Antony Chapoto, 2014.
1391. *Beyond agriculture versus nonagriculture: Decomposing sectoral growth–poverty linkages in five African countries.* Paul Dorosh and James Thurlow, 2014.
1390. *Agriculture, incomes, and gender in Latin America by 2050: An assessment of climate change impacts and household resilience for Brazil, Mexico, and Peru.* Lykke E. Andersen, Clemens Breisinger, Daniel Mason-D’Croz, Luis Carlos Jemio, Claudia Ringler, Richard Robertson, Dorte Verner, and Manfred Wiebelt, 2014.
1389. *Does rice farming shape individualism and innovation?: A response to Talhelm et al. (2014).* Jianqing Ruan, Zhuan Xie, and Xiaobo Zhang, 2014.
1388. *On food security stocks, peace clauses, and permanent solutions after Bali.* Eugenio Diaz-Bonilla, 2014.
1387. *Economics of tractor ownership under rainfed agriculture with applications in Ghana.* Nazaire Houssou, Xinshen Diao, and Shashidhara Kolavalli, 2014.
1386. *Land rights knowledge and conservation in rural Ethiopia: Mind the gender gap.* Agnes R. Quisumbing and Neha Kumar, 2014.
1385. *The patterns of patents in China.* Zhuan Xie and Xiaobo Zhang, 2014.
1384. *Understanding the rapid reduction of undernutrition in Nepal, 2001–2011.* Derek D. Headey and John Hoddinott.
1383. *Two-tier asymmetric information as a motive for trade, trade policies, and inefficient trade agreements.* Antoine Bouët, David Laborde, and David Martimort, 2014.
1382. *The tide that does not raise all boats: An assessment of EU preferential trade policies.* Maria Cipollina, David Laborde, and Luca Salvatici, 2014.
1381. *The impact of India’s rural employment guarantee on demand for agricultural technology.* Anil K. Bhargava, 2014.
1380. *Towards understanding economic growth in Africa: A reinterpretation of the Lewis Model.* Xinshen Diao and Margaret McMillan, 2014.
1379. *The nutritional returns to parental education.* Harold Alderman and Derek D. Headey, 2014.
1378. *Evidence-based research and its effect on policymaking.* Nurul Islam, 2014.
1377. *The development push of refugees: Evidence from Tanzania.* Jean-François Maystadt and Gilles Duranton, 2014.
1376. *Food safety and developing markets: Research findings and research gaps.* Laurian Unnevehr and Loraine Ronchi, 2014.
1375. *Costing alternative transfer modalities.* Amy Margolies and John Hoddinott, 2014.
1374. *Do girls pay the price of civil war?: Violence and infant mortality in Congo.* Olivier Dagnelie, Giacomo De Luca, and Jean-François Maystadt, 2014.
1373. *Variable returns to fertilizer use and its relationship to poverty: Experimental and simulation evidence from Malawi.* Aurélie Harou, Yanyan Liu, Christopher B. Barrett, and Liangzhi You, 2014.
1372. *Drought risk reduction in agriculture: A review of adaptive strategies in East Africa and the Indo-Gangetic Plain of South Asia.* Nicola Cenacchi, 2014.

**INTERNATIONAL FOOD POLICY
RESEARCH INSTITUTE**

www.ifpri.org

IFPRI HEADQUARTERS

2033 K Street, NW
Washington, DC 20006-1002 USA
Tel.: +1-202-862-5600
Fax: +1-202-467-4439
Email: ifpri@cgiar.org