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FOOD SECURITY POLICY CHOICES: A REVIEW OF THE USEFULNESS OF PUBLIC POLICY TAXONOMIES

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ABSTRACT

This paper addresses the "dependent variable" problem in food security policies, namely the difficulty in classifying food security policies that limits comparative policy studies. Policy comparisons require criteria that are general enough for broad application but sensitive to the context. A rigorous and objective basis for comparisons would allow for studying how policies, and food security policies in particular, emerge. This is important in Africa as, in the past, food security and nutrition crises have been attributed to the failure of government policies. This paper reviews the main key available public policy classifications based on their predictability, mutual-exclusivity and relevance. These include Lowi's and Wilson's typologies, the agricultural policies' classification by Norton and the FAO-FAPDA classification. The review found that available typologies do not accommodate multi-sectoral actions and are not entirely applicable to food security public policy classification. The domain shift from food policy to food security, and more recently to food systems demands that all elements in the food system to be taken into consideration in the policy process. This limits the use of policies as "dependent variables" and hence the study of how they emerge, particularly in Africa. A critique of available policy classes shows that these cannot be treated as "dependent variables". It is argued that a potential solution to the "dependent variable" problem of food security policies lies in the development of a taxonomy, simplifying their complexity with analytical shortcuts. Having reviewed Candel and Daugbjergs' recent taxonomy, refinements are proposed to be applied in the African context. The proposed taxonomy represents an alternative to classify food security policies in Africa along four core dimensions. This classification offers prospects for researchers to study what factors drives policy-classes in one direction or the other, along the four dimensions. Although the scales and calibration of the four dimensions will need to be developed and tested, the proposed typology offers a way to treat the dimensions as "dependent variables".

Key words: policy-classification, food-security policy, food systems, policy-taxonomy, Lowi, Wilson, dependent variable problem, Africa

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INTRODUCTION

Contemporary policy analysis is based on the notion that general patterns of policy cannot only be identified but also predicted [1]. Considerable differences exist among African food security policies, particularly after the 2008-2010 food crises [2]. However, a system for comparisons does not exist due to a lack of consensus over the definition of food security policies [3], giving rise to a "dependent variable" problem (the fuzziness of the scope and boundaries of what is being compared in comparative policy studies) [4]. The impracticality of existing classifications [5] limits research on what enables and constrains policy adoption.

This paper focuses on the classification of policy choices to address food insecurity, which is relevant for understanding how policies, and food security policies in particular, emerge in Africa. First, this knowledge is crucial to define what is studied, compared and debated. Second, Barro's [6] seminal work on countries' economic performance recommended the inclusion of regional dummy variable for Africa in policy studies following the findings by Sachs and Warner [7] and Barro [8] that the causes of Africa's poor economic performance were linked to public policy choices. However, the dependent variable conundrum is not solved by simply substituting a regional dummy for policy choice. Third, Africa has experienced waves of policy change, influenced by development paradigms and common drivers as well as the evolution of the concept of food security itself. Food security solutions are seen through different lenses [9], in different foci (rural development, aggregate supply, rights and entitlements) and prescriptions (agricultural modernisation, structural adjustment, safety nets, the SUN initiative and agricultural transformation). These represent paradigms inspired by dominant economic doctrines and pressure from donors.

However, the lack of classification clarity restricts comparability across food security policies. A classification system orders policies and sets out their distinct features. Policy-classes are associated with distinctive patterns of political behaviour and processes. These associations are useful for analysis. First, policy-classes are shortcuts to analyse the underlying processes of political relationships and expectations. Second, in recognising these associations and interpreting their diversity, a classification helps stakeholders laying out the rules for how to engage with the process. Third and most importantly, clearly articulated concepts and shared understanding of policy-classes are the foundation of comparative policy analysis. Comparisons require classification criteria that are general enough for broad application but sensitive to the context. Fourth, a classification plays an essential role in creating a common basis for scholars, practitioners and policymakers to communicate. Lastly, not only can such classifications be used to associate policy categories with certain outcomes, they enable investigation of causal patterns to predict policy outcomes.

This paper reviews available policy typologies and assess them based on their predictive value, applicability and mutual exclusivity. In addition, a policy taxonomy is suggested as an alternative to the classifications reviewed.

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WHAT SHOULD BE CLASSIFIED?

A policy is a relatively stable, purposive course of action to address a matter of concern. It is difficult enough to define sectorial policies: "there is no such thing as: agriculture policy, environmental policy, science policy, health policy, or any other policy defined by subject matter alone [10]. The 'type of policy' is what the state is doing to, for, or against agriculture, environment, etc." But what the state is doing for food security implies decisions, negotiations and feedback from multiple sectors and at different levels of government.

Defining and classifying food security policies as "dependent variables" is difficult for two reasons. First, food security is a complex concept [11]. The definition of food security and, consequently, the policy options have evolved over time. There has been a gradual shift in past decades from a "food policy" approach, in which government intervened on supply and demand, guided by the paradigm that "food prices reflect relative scarcity and abundance" [12] to a more holistic concept of food security and nutrition. While various food systems' elements were considered in policymaking, the multidisciplinarity of food security and the increase in trade result that present food systems are no longer understood "as a way of moving commodities from farm to (often local) plate" [13]: the interactions between producers, traders and consumers are now more frequent and complex than in the past [14].

Second, the multidimensionality of food security policies often results in different framings, depending on which aspects are prioritised and through which instruments. Governments frame similar interventions differently. For example, food fortification regulations may be part of food security policies in some countries, but a health issue in others. What might be seem a common intervention, such as agricultural input subsidies can in fact have different shapes [15], use different instruments (coupons, direct distribution, and with different roles for the private sector) and different goals (combat inequalities, increase national food supply, improve rural incomes).

Aware of these challenges, we define food security policy as a public action, without a definite timeframe that seeks to improve and/or stabilise food availability, access and utilisation for a significant part of the population. It does so through measures affecting the behaviour of food producers, traders and consumers.

A CRITIQUE OF AVAILABLE POLICY TYPOLOGIES

The term classification describes a concept along one or more classification criteria (or principles). A typology is a classification along dimensions that represent types, rather than empirical cases. A policy typology places an event among classes characterised and defined by classification principles. The most influential work on policy classification includes typologies developed by Lowi and Wilson. Lowi [16] classified policies with two criteria, the likelihood of coercion (whether it is more likely or more remote) and applicability of coercion (whether it is applied directly to individuals or through the environment of conduct). Lowi's four basic policy types (Fig. 1) included: (i) *regulatory* (coercion is likely and applied to individuals); (ii) *constituent* (coercion is remote and

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applied to the environment, permitting one person or organization to work as an agent); (iii) *distributive* (coercion is remote and applied to individuals, for example, measures concerning the distribution of new resources); and (iv) *redistributive* (coercion is likely and applied to the environment, . measures that modify the distribution of existing resources).

Likelihood of coercion	**Applicability of coercion**		
		Individual conduct	Environment of conduct
Remote		Distributive	Constituent
Immediate		Regulative	Redistributive

Figure 1: Lowi's typology of policies
Source: [16]

Wilson's [17] typology examined the perceived costs and benefits of policies, specifically whether their results were widely distributed or narrowly concentrated. Each combination (Fig. 2) yields different policy outcomes. *Majoritarian politics* results inwide distribution of both the costs and the benefits of a specific policy. *Interest group* politics (those confronted with opposition from rival interest groups), result when both the costs and benefits are concentrated. Policies that require the presence of '*political entrepreneurs'* (those, willing to develop and put through political proposals despite societal resistance), are the result of concentrated costs and diffuse benefits. *Clientelism* results when costs of concentrated benefits are diffuse.

Costs	**Benefits**		
		Concentrated	Diffuse
Concentrated		Interest groups politics (0 sum game)	Entrepreneurial politics
Diffuse		Clientelism	Majoritarian

Figure 2: Wilson's typology of policies
Source: [17]

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The classification of policies into conceptual classes is difficult [18], particularly for food security policies, in part, because of the multidisciplinary nature and, in part because classification principles are by definition, abstract [19]. The available policy-classes are neither exhaustive nor mutually-exclusive and descriptive rather than explanatory or predictive. Reification [20] poses a problem as food security policies may fall into one class or another, depending on which features attract the observer's concern [21]. This is particularly evident in Lowi's typology, as classes are not mutually exclusive. Interventions such as school feeding, food stocks, subsidies, risk management measures and social protection could be classified as distributive but could have elements of other policy types, such as a modification to the role of government agencies (a constituent policy) and regulations about what and how is being distributed. Most regulatory policies present new responsibilities for existing agencies that enforce regulations, indicating elements of constituent policies.

Another problem with Lowi's typology appears when confronted with neopatrimonial states. The notion of neopatrimonialism characterises states where patrimonial practices inhabit the realm of informal institutions that exist alongside formal, legal-rational institutions, resulting in a particular political logic: leaders and their opponents use both formal institutions (the state) and informal rules, norms and practices (personalism, clientelism, patronage, de facto centralised control of state resources) to gain legitimacy and advantage in a 'winner-takes-all' competition for control of the state. When applying Lowi's typology to a case of a neopatrimonial state, it would be difficult to observe how elements of patrimonial and legal-rational domination penetrate each other, resulting in insecurity about the actual coercion of state institutions [22]. Even when a policy applies coercion *de jure*, poor state capacity and legitimacy of formal institutions limit enforcement.

Wilson's typology has the advantage of presenting predictable classes based on perceived costs and benefits. However, it is challenging to link policies to actual costs and benefits. Wilson's typology has been used to explore, speculate and identify processes influencing policy choice, rather predicting policy outcomes [23].

The "clientelistic" class raises concern over mutual exclusivity. Clientelism represents a transaction - the direct exchange of citizen's support in return for specific benefits [24] from public resources. This is consistent with Wilson's typology, where costs are diffuse and benefits concentrated. However, even if public goods could potentially improve constituent welfare more than narrow transfers, patrons/politicians would still avoid them if they cannot convince clients that the public or untargeted goods (which apparently benefit constituents only by chance), are in fact the result of efforts by patrons on their behalf [25]. Such cases of diffused costs and benefits would escape classification in Wilson's typology.

AVAILABLE TAXONOMIC APPROACHES

Another meaning of classification is an operation "whereby the objects or events of a given set are grouped, according to the perceived similarities" [26]. This interpretation starts from the analysis of single events and compares them based on their level of

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generality and details they share. This way of classifying is called a taxonomy [20]. Two common approaches are reviewed, namely Norton's and the Food and Agriculture Policy Decision Analysis (FAPDA)'s of the UN Food and Agriculture Organisation (FAO).

As noted earlier, food security is affected by policies in different sectors. However, for decades the concept of food security was narrowly associated with agriculture and the classification of agricultural policies received more attention. Norton's [27] classification was based on the producer's point of view, classifying policies as:

- Price policies, including macroeconomic policies
- Resources policies, including land policies, and natural resources management
- Policies affecting access to inputs, products and technology.

Norton's classification has the advantage of being easily applicable but is limited for only considering interventions that affect production, among different components of food systems. Some food systems' interventions fall outside of the purview of agricultural policy, and rather into an intersectoral domain negotiated by heath, nutrition, social protection and trade agents in policy discussion. Even some producers' support would be challenging to classify, such as more complex agroindustrial policies in Nigeria and Ghana [28]. With the evolution of the concept of food security, Norton's classes are not exhaustive nor mutually exclusive.

The FAPDA collects, registers and classifies policy information [29]. The classification tool was published during the 2008 food price crisis, in a three-category framework, based on the elements of food systems targeted:

- Consumer-oriented policies provide direct support to consumers and vulnerable groups such as social safety nets, food assistance and price control;
- Producer-oriented policies influence production using measures such as minimum producers' prices, public purchase mechanism and input subsidies; and
- Trade-oriented and macroeconomic policies include trade policy instruments such as tariffs and exports controls to manage prices or domestic supply [30].

Specific sub-categories allow for the classification of policies in more detail (Fig. 3). Because the FAPDA addresses the components of the food system, the classification principles are more easily observable. However, the classification does not seek to classify public policies, but policy decisions, that is single choices made in particular instances, either temporarily or undertaken in the framework of a more comprehensive development plan. The object of this classification is not consistent with the definition of food security policy provided earlier, which is usually characterised by more complex frameworks. For example, Zambia's decision to temporarily ban food exports in 2016 could be easily classified as consumer support. However, Ethiopia's complex social protection graduation concept (a central feature of Ethiopian food security policy) is more difficult to classify in terms of support to single elements in the food system.

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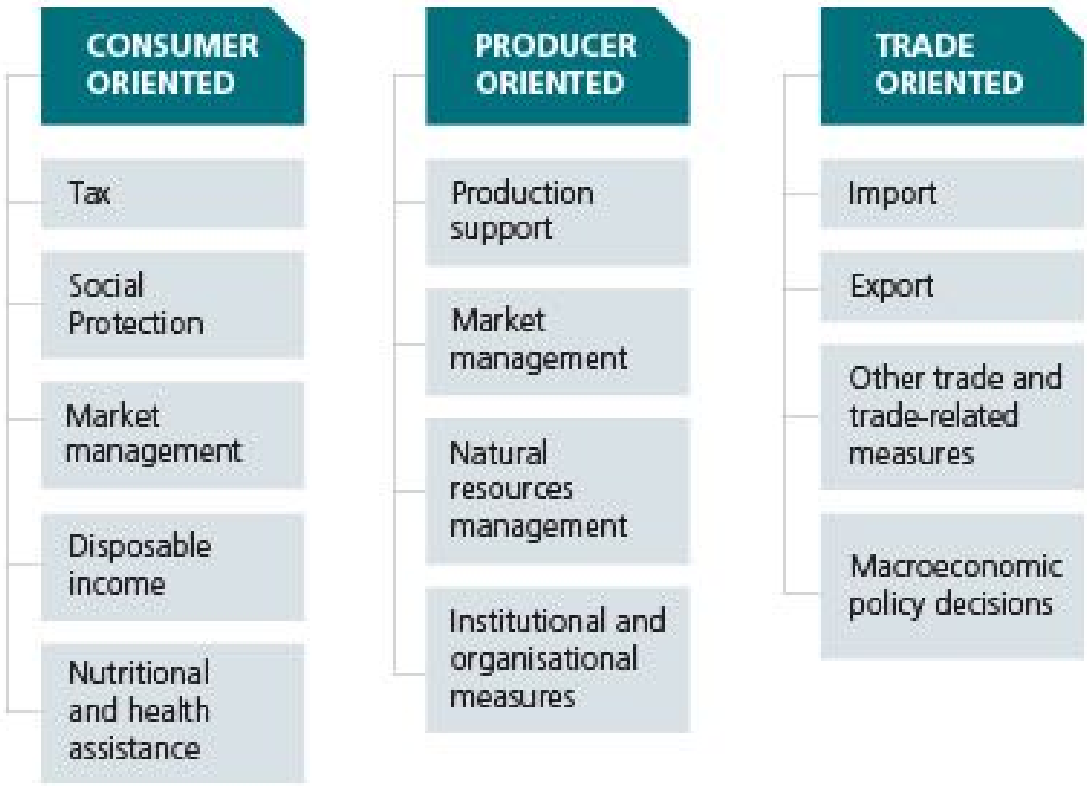

Figure 3: FAPDA Classification
Source: [29]

A TAXONOMY OF FOOD SECURITY POLICIES IN AFRICA

In addressing the food security policy classification, a taxonomic approach seems more effective, despite the limitations of the frameworks reviewed. The policy process is usually complex and results from the interaction of different interest groups. Sorting policy-outcomes in *a priori* defined classes, as in typologies, is more difficult in empirically observing common features and differences. Instead, the choice of the classification principles should be based on how much exhaustive policy-classes would result, how easy it would be to distinguish them and how predictive classes would be in order to address the "dependency variable" problem. Candel and Daugbjerg [3] proposed a classification of food security policies using four core-dimensions along which empirical policy manifestations occur. It represents a valid alternative for better defining food security policies. The classification criteria proposed are:

- The scope refers to which policy problem they address. This can vary from a narrow scope in which, for example, food production is the main concern to a wide scope in which the policy includes a broad range of dimensions.
- The degree of targeting involves the precision of linking objectives in a policy. This distinguishes between three levels of goals, ranging from 'general abstract policy aims' to 'specific policy targets' [31].

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- Substantiality refers to the extent to which policies contain the actual means to pursue the objectives and targets [32]. Operationally, the substance of policy is defined by the mixture of policy instruments applied, implying more (high substantiality) or less (low substantiality) binding measures.
- The policy integration refers to the extent to which food insecurity, as a cross-cutting problem or specific challenges within the food system, is addressed more or less holistically [33].

Comparative studies usually begin by defining the universe of study [34]. Where key political and economic characteristics of the economy are consistently shared by sets of countries (such as the length of supply chains and the challenges of urbanisation and poverty) it could be wise to adapt the taxonomy to suit the particular contexts. Some characteristics of African economies and politics justify the adoption of different criteria for classification, as a mean to better compare their interventions.

In an attempt to identify predictable policy-classes in the African contexts, two refinements to Candel and Daugbjerg's classification are proposed. Firstly, replacing the dimension of substantiality with state involvement. A more easily observable characteristic in many African countries is the direct provision of goods and services. Despite the classifications of instruments [35], a policy usually involves the simultaneous use of various tools as a mix [36]. The role of the state could be seen as, at one extreme, the state is a "manager", such as in input subsidies interventions or price controls. At the other end, it is an "enabler", improving food production and consumption through the improvement of the economic environment or education or lowering transaction costs. Figure 4 presents the range of possible instruments a state can use in implementing a policy. It is rare for instruments at the opposite ends of the spectrum in Figure 4 to be adopted simultaneously. More often, the choice of the instruments "cluster" around two or three key instruments within the same range in Figure.

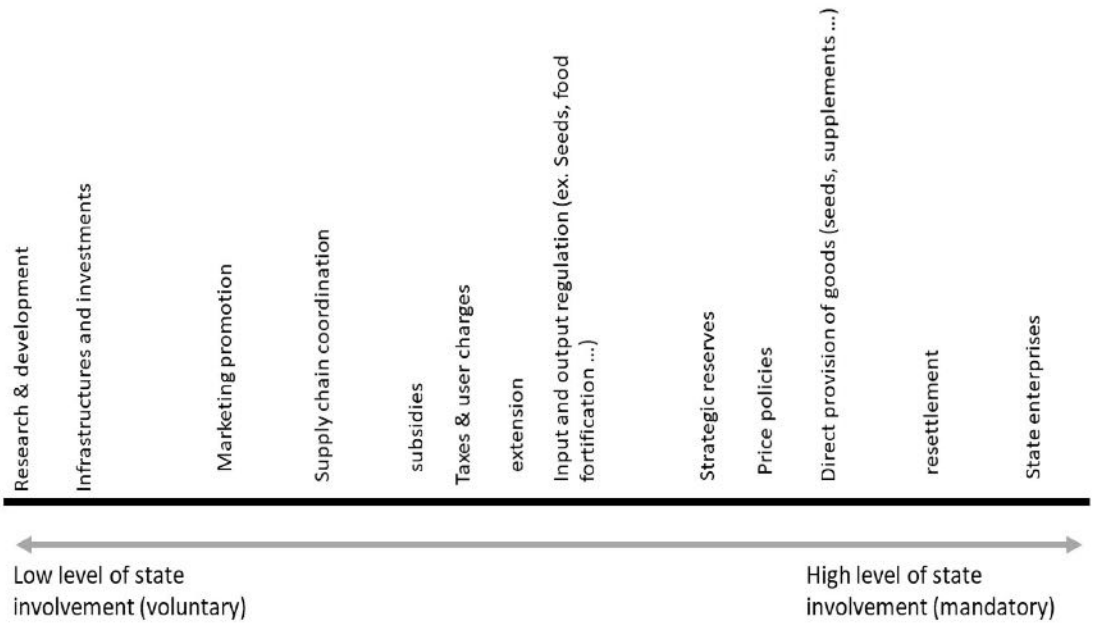

Figure 4: Spectrum of state involvement
Source: Authors' own work

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Secondly, geographic scope could be substituted for Candel and Daugbjerg's degree of targeting. This would distinguish policies that apply and are implemented across the whole country from those with geographic bias, where implementation is concentrated in a specific area. Geographic bias can emerge when food security is perceived as a problem related to a specific area(s), including cities when:

- A particular supply chain based on an area-specific crop are seen as the main means to achieve food security or
- The policy adopts tools that apply to the whole country in principle but implementation favours particular areas.

A narrow geographical focus in food security policy and the localised provision of private goods can be justified in targeting underperforming areas such as disadvantaged regions. But in some cases, geographic bias can result from lack of state capacity or clientelism. Applying this criterion would enrich the policy classification by providing a more exhaustive dimension.

We compared the current food security policies for Benin[37], Kenya[38], Malawi[39] and Mozambique [40], applied to Candel and Daugbjerg's dimensions of policy integration and scope (the latter simplified as producer- or consumer-oriented). Policy documents and background strategies (such as growth, rural development and poverty reduction strategies), implementation plans and relevant legislation were examined. A matrix (Annex A) was developed to evaluate food security policies against objective criteria with scores from 0 to 1. "Anchor points" were used to link qualitative statements to scores, classifying interventions along the range for each dimension. Each policy was subjectively scored along the four classification dimensions (in Annex B) to see whether this classification could distinguish the cases (see Figure 5).

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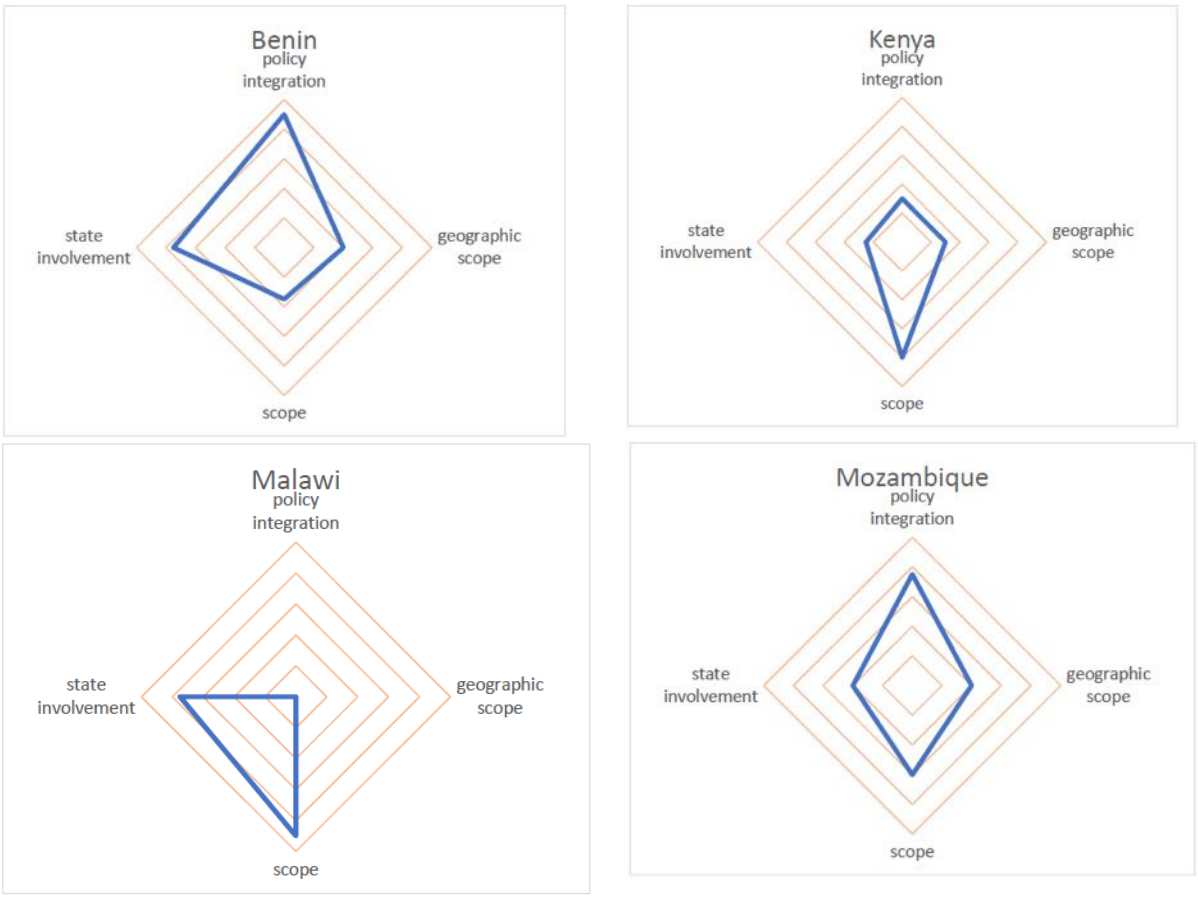

Figure 5: Food security policy classification diagram
Source: Authors' own work

These policies would have been challenging to classify with Lowi and Wilson's typologies, but also Norton's or FAPDA's classifications due to the mix of instruments deployed. But our four dimensions were treated as "dependent variables". While agricultural inputs were important features in four policies, their difference in policy goals, implementation modalities and coverage varied, resulting in different positions along the four dimensions. For example, in Benin, agricultural subsidies are part of a multi-ministerial effort that includes nutritional interventions, price controls and livelihood support, mostly in favour of rural consumers. In Malawi, the food security policy largely focused on maize productivity, with little involvement of other sectors, resulting in a low policy integration, but also geographic scope.

Our policy classification compares the four policies examined (see Fig. 5). It is easy to distinguish highly integrated policies (such as in Benin and Mozambique) from the less integrated. Policies with a broad geographic scope (Mozambique, despite some uneven coverage due to the recent conflict) can be compared with those with geographic bias. Policies can be distinguished based on their orientation, towards consumers (Benin) or producers. Benin and Malawi, where state agencies have active roles in the policy implementation, can be juxtaposed to low state involvement countries (Mozambique and

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Kenya, where the agricultural diversification helped moderating the scope of the state's role).

CONCLUSION

Having reviewed the available policy typologies, assessed their relevance to food security and evaluated their applicability to food security policies (based on the predictive value, applicability and mutual exclusivity), it was found that the available typologies were not entirely useful for food security policy classification. The shift from food policy to food security, and more recently to food systems demands that all elements in the food system be taken into consideration in the policy process. The multidisciplinarity of food security interventions and the need to consider their impact on a wide range of food systems elements limit the use of policies as "dependent variables" and hence the study of how they emerge, particularly in Africa.

It is argued that a potential solution to the "dependent variable" problem of food security policies lies in the development of a taxonomy, simplifying their complexity through empirical analytical shortcuts. Candel and Daugbjerg's proposed taxonomy seems more useful in contemporary food security policy contexts. It is proposed that a refined taxonomy to be applied in African comparative studies. Although the scales and calibration of our assessment along the four dimensions will need to be empirically tested, food security policies can be treated as "dependent variables". This classification offers prospects for researchers to study what factors drive policy-classes in one direction or the other, along the four dimensions, and hence to predict policy choices.

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ANNEX A: Calibration of policy analysis

Score	Policy integration	Geographic scope	Policy scope	State involvement
1	Food security embedded within all relevant subsystems High level of interaction and shared policy goals embedded within an overarching policy.	Policy rules uniformly applied across a country.	Where the Nominal Rate of Protection (NRP) was significantly positive for all main crops and the policy provides specific producer support decisions. Producers are clear policy targets.	The state was a manager. Food security seen as the result of the active involvement of state agencies in managing the policy only.
0.8		Rules uniformly applied, resulting in different implementation in different areas, depending on needs.	NRP positive but volatile and the policy provides for specific producer support.	
0.75	Food security formally embedded within subsystems (such as trade, nutrition, poverty reduction and agriculture). Regular and formal exchange of information and coordination, possibly through coordinative instruments.			State actively involved in managing initiatives and policies in various aspects. "Mandatory" instruments preferred, although efforts were also made to complement them with initiatives to promote marketing, supply chain management and rural infrastructure development.
0.7		Policies uniformly applied but linked to one type of action, resulting in different geographic applications.		
0.6			NRP sometimes positive for some important crop Consumer policies are historically important, but domestic production is still seen as crucial for food security.	

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Score	Policy integration	Geographic scope	Policy scope	State involvement
0.5	Food security formally embedded within more subsystems but with infrequent interaction among them Different sectorial strategies not coordinated. Subsystems do not attempt to develop synergies, as policy coherence was not given attention.	Policies designed for the whole country, but some parts of the implementation were geographically uneven due to differences in local state capacity or due to *force majeure.*	Where NRP 0, with livelihood protection as the main policy intervention.	"Voluntary" and "mandatory" instruments seen as complementary and reflected in the state budget.
0.4	Food security defined in broad terms, but with infrequent interactions among different subsystems, and different sectorial strategies were not coordinated.	Policies designed for the whole country, but differences in state capacity or *force majeure* made this application geographically uneven.	NRP positive for some cash crops, but not for staples. Measures to increase productivity exist, but in the context of protecting livelihoods. The core objectives of the policy focus on consumption.	
0.3	Food security defined in narrow terms, but some attention granted to other dimensions and interactions with other policy efforts. Food security regarded as the domain of a "dominant" subsystem. Infrequent information exchanges between the dominant subsystem and other institutions and stakeholders.	Policy focus on a specific crop, farmed unevenly across the country.		The state retained some key functions, such as regulation and enforcement, but "voluntary" instruments had a more important place in policy design and implementation than mandatory instruments.
0.25			Where measures to increase productivity existed, but in the context of protecting livelihoods. Consumers are the policy targets and a key to political stability.	The direct provision of goods and services could still be undertaken by the state, but "mandatory" instruments were less important than "voluntary" to achieve policy goals. Food security seen as resulting from market development, with state's role to enabled it through infrastructure, rural investment and research.

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Score	Policy integration	Geographic scope	Policy scope	State involvement
0	Food security defined in narrow terms, for example, as solely an issue of agricultural production. The matter falls within the jurisdiction of a dominant subsystem. There are no interactions among different actors because no other subsystem is involved.	Where there were uneven policy provisions on a geographic base as a result of interest groups' action and *force majeure*.	Where the food security policy exclusively comprehended measures to protect consumers, such as price interventions, or to increase access and utilisation for consumers.	States were enablers where food security was an individual's responsibility rather than a state responsibility, although some services were ensured by the state, such as training, research, biodiversity conservation or public infrastructure development.

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ANNEX B: Food security policy classification

Policy	Benin Programme Nationale de Sécurité Alimentaire (PNSA), 2014	Kenya National Food and Nutrition Security Policy Implementation Framework 2017–2022 (NFNSP-IF), 2011	Malawi Fertiliser and Input Subsidy Programme (FISP), various years	Mozambique Estratégia e Plano de Accao de Segurança Alimentar e nutritional 2008-2015 (ESAN II), 2007
Brief description	Direct support for producers (crop intensification, storage, seeds, animal genetic material, etc.) + nutritional component + Income-generating activities. Scaled up in 2018.	Operationalisation of multi-sectoral approach to nutrition	Input subsidies since 2005 with different modalities and packages, targeting mechanisms, role of the private sector and scale.	Integrated approach with a human rights perspective. Focus on productivity and alternative livelihoods, collaboration among government entities, Monitoring and Evaluation, research.
Classification criteria				
Policy Integration	The policy frame for food security well integrated. ONASA (*Office National d'Appui à la Sécurité Alimentaire)* advises on food security matters and provides active efforts to coordinate among different state agencies **Score of 0.9** (for difference in policy goals among different actors).	Despite the holistic vision enunciated in the document, the FNSP-IF is not harmonised with other key policies and implemented in narrow terms. Key differences of view between the Ministry of Public Health and Sanitation and the Ministry of Agriculture. Institutional architecture ineffective. The decentralisation process occurred without adequate preparation, resulting in conflicting mandates between levels of government and the lack of coordination mechanism. **Score of 0.**3.	Food security defined only in terms of maize production Two most relevant institutions, the Agricultural Development and Marketing Corporation and the National Food Reserve Agency, working in isolation, if not rivalry. Short-term view, without planning of other activities. Large number of policy statements, decisions and strategies but largely uncoordinated and Poor interactions among subsystems **Score of 0.**	Harmonious policy architecture, in the framework of the five-year plan. Technical Secretariat for Food and Nutrition Security (SETSAN) effectively contributing to policy integration with frequent interactions between different ministries. The policy has been given a policy integration **score of 0.75** to reflect some gaps in liaising ESAN II with the safety net programme.

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Policy	Benin Programme Nationale de Sécurité Alimentaire (PNSA), 2014	Kenya National Food and Nutrition Security Policy Implementation Framework 2017–2022 (NFNSP-IF), 2011	Malawi Fertiliser and Input Subsidy Programme (FISP), various years	Mozambique Estratégia e Plano de Accao de Segurança Alimentar e nutritional 2008-2015 (ESAN II), 2007
Geographic scope	Differences in rural infrastructures make implementation uneven. Uneven availability of subsidised inputs. Policy is applied across the country, but different capacities at local level justify a **score of 0.4**.	Policy not equipped to support areas are dominated by smallholders and commercially oriented farmers at the same time. Focus of the policy on maize production, farmed in very different conditions across the country and protected by key interest groups. The geographic scope has **score of 0.3**.	Distribution matrixes developed as rules for geographic distribution are not implemented with large discrepancies by districts. Inefficient logistics, resulting in situations where coupons cannot be redeemed. The programme is geographically biased, with a **score of 0**.	Differences in local capacities of implementation. Political instability in parts of the country limits the uniform application of the policy This policy criterion was evaluated with a **score of 0.4**.
Scope	Direct food-producer support through input subsidies is maintained, but targeting rice, which is a cash-crop. Maize, the most important staple, faces disincentives since 2014. Consumers' protection addressed by marketing measures, buffer stocks for basic food items distributed at a subsidised price. Main policy targets are raising rural incomes, diversified diets and subsidised food. The policy has, therefore, a consumer-orientation, with **a score of 0.35**, because measures to increase agricultural productivity were mostly framed as livelihood protection, and greater attention given to price control and nutrition for consumers.	Positive (although volatile) NRP for maize and rice. Some social protection measures and the school feeding scaled up, but public expenses allocated are well below those allocated to input subsidies. Kenya's **score is 0.8** for its positive (although volatile) support to food producers.	Clear orientation towards producers High Nominal Rate of Assistance (26% on average during the period 2005–2013). The **score is 0.9**, in a context of the growing relevance of social protection.	Policy emphasises increased farm output and food marketing. Important social protection programme, but government control of prices has been minimal, and applied ad hoc Public spending on producer support is higher than on consumers, but social protection is increasing. The NRP at the point of competition exhibits a consistent, albeit volatile, positive trend. The policy is producer-oriented, evaluated with a **score of 0.6**, for the historical and budgetary relevance of support to consumers.

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Policy	Benin Programme Nationale de Sécurité Alimentaire (PNSA), 2014	Kenya National Food and Nutrition Security Policy Implementation Framework 2017–2022 (NFNSP-IF), 2011	Malawi Fertiliser and Input Subsidy Programme (FISP), various years	Mozambique Estratégia e Plano de Accao de Segurança Alimentar e nutritional 2008-2015 (ESAN II), 2007
State involvement	High importance of mandatory interventions, such as food fortification, input subsidies, irrigation infrastructure and price control, whereby ONASA engages directly in marketing through its shops. The policy's level of state involvement is high, but the policy focuses on consumers (discussed earlier) and on protecting livelihoods, and moderates the state's managing role for the use of "mandatory" instruments in the policy. For these reasons, the **score allocated was 0.75**.	Diverse economy and moderate level of state involvement in the markets and trade. Agriculture-specific expenditures since 2008 are well below expenditures on agriculture support. Moderate position in terms of e state involvement in output market interventions, input subsidies and trade restrictions. The Kenyan policy has a low level of state involvement (**score of 0.25**), as food security seemed the outcome of market development and "voluntary" instruments seemed less important than "mandatory" ones.	Dominance of subsidies and attempts at price control The state involvement is high, but the lack of coordination does not allow the state to be a manager. The **score assigned is 0.75**.	Intermittent input support by the state. The ESAN II document details the tasks and responsibilities expected by the state, its partners, civil society and the private sector. It is expected that the private sector would take on functions that in other countries of this study are state functions (investments for rehabilitation; expansion and modernisation of infrastructure, employment, agricultural processing). The level of state involvement is classified as low, with a **score of 0.**3, for the prevalence of voluntary instruments, but complemented by the importance of regulation.

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