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Original Scholarship

Legal Feasibility and Implementation of Federal Strategies for a National Retail-Based Fruit and Vegetable Subsidy Program in the United States

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Policy Points:

- Suboptimal intake of fruit and vegetables is associated with increased risk of diet-related diseases. A national retail-based fruit and vegetable subsidy program could broadly benefit the health of the entire population.
- Existing fruit and vegetable subsidy programs can inform potential implementation mechanisms; Congress's powers to tax, spend, and regulate interstate commerce can be leveraged to create a federal program.
- Legal and administrative feasibility considerations support a conditional funding program or a federal-state cooperative program combining regulation, licensing, and state or local options for flexible implementation strategies. Strategies to engage key stakeholders would enable the program to utilize lessons learned from existing programs.

Context: Suboptimal intake of fruit and vegetables (F&Vs) is associated with increased risk of diet-related diseases. Yet, there are no US government programs to support increased F&V consumption nationally for the whole population, most of whom purchase food at retail establishments. To inform policy discussion and implementation, we identified mechanisms to effectuate a national retail-based F&V subsidy program.

Methods: We conducted legal and policy research using LexisNexis, the UConn Rudd Center Legislation Database, the Centers for Disease Control and Prevention Chronic Disease State Policy Tracking System, the US Department

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of Agriculture's website, Congress.gov, gray literature, and government reports. First, we identified existing federal, state, local, and nongovernmental organization (NGO) policies and programs that subsidize F&Vs. Second, we evaluated Congress's power to implement a national retail-based F&V subsidy program.

Findings: We found five federal programs, three federal bills, four state laws, and 17 state (including the District of Columbia [DC]) bills to appropriate money to supplement federal food assistance programs with F&Vs; 74 programs (six multistate, 22 state [including DC], and 46 local) administered by state and local governments and NGOs that incentivize the purchase of F&Vs for various subpopulations; and two state laws and 11 state bills to provide tax exemptions for F&Vs. To create a national F&V subsidy program, Congress could use its Commerce Clause powers or its powers to tax or spend, through direct regulation, licensing, taxation, tax incentives, and conditional funding. Legal and administrative feasibility considerations support a voluntary conditional funding program or, as a second option, a mandatory federal-state cooperative program combining regulation and licensing.

Conclusions: Multiple existing programs provide an important foundation to inform potential implementation mechanisms for a national F&V subsidy program. Results also highlight the value of state and local participation to leverage existing networks and stakeholder knowledge.

Keywords: fruits and vegetables, retail, subsidy, nutrition policy, government authority.

Suboptimal intake of fruit and vegetables (F&Vs) is associated with increased risk of diet-related diseases, including obesity, type 2 diabetes, cardiovascular disease, and certain cancers.[1-4] The US Dietary Guidelines recommend that all Americans should consume more F&Vs.[5] Yet, the Centers for Disease Control and Prevention (CDC) finds that only 12.2% of US adults meet recommendations to consume 1.5-2 servings of fruit daily, and 9.3% meet recommendations to consume 2–3 servings of vegetables daily, with low intake across all population subgroups, including by age, sex, race/ethnicity, and income.[6] High cost and lack of availability and access are persistent barriers to F&V consumption.[6] These barriers are particularly salient among low-income Americans,[7,8] but evidence suggests that they limit F&V consumption for higher-income Americans as well.[9,10] The CDC and other organizations have called for evidence-based strategies to address these barriers.[6]

Strong evidence, including from randomized interventions, demonstrates that lowering the price of healthier food through subsidies increases their purchase and consumption across various settings and populations.[11-15] Such analyses suggest that federal expansion of a 30% F&V subsidy to the broader US population could prevent more than 30,000 cardiovascular deaths annually.[16] There is also increasing federal interest in such programs, evidenced, for example, by the considerable expansion of the Food Insecurity Nutrition Incentive (FINI) Grant Program, renamed the Gus Schumacher Nutrition Incentive Program (GusNIP), which subsidizes F&V purchases for Supplemental Nutrition Assistance Program (SNAP) participants, and by pilot funding in the 2018 Farm Bill to implement and evaluate healthy produce prescriptions for patients within health care systems.[17] Modeling research suggests that such programs are highly cost-effective, producing savings in health care expenditures.[1,2] In addition, lower-income households have particularly low intakes of F&Vs and may be more responsive to price changes;[20] thus, food-pricing policies appear likely to reduce diet-related health disparities.[16,21,22]

Among different mechanisms to accomplish a national F&V subsidy, one direct pathway would be a retail-based program that decreases the price of F&Vs at the point of sale. Such a national program—available to all consumers and helping to support American farmers and retailers—may facilitate diverse stakeholder support, increasing political feasibility. However, the administrative mechanisms to implement such a federal program are not established, creating a key obstacle for governmental authorities to consider such an action. To fill this gap in the research and inform policy discussions and potential implementation options, we reviewed existing relevant US programs that could serve as models for a national program and identified legally feasible mechanisms for the federal government to effectuate a national retail-based F&V subsidy program. This investigation was performed as part of the Food-PRICE (Policy Review and Intervention Cost-Effectiveness) Project (www.food-price.org).

Methods

This research first identified and reviewed existing federal, state, local, and nongovernmental organization (NGO) programs or policies that could serve as models to provide reduced-price F&Vs to consumers; and second, evaluated Congress's powers to implement a national retail-based F&V subsidy program. All research was conducted between December 1, 2017, and April 11, 2018.

Policies and Programs That Subsidize F&Vs

To identify potential mechanisms to implement an F&V subsidy program at retail establishments, we researched policies and programs that subsidized F&Vs and were proposed or implemented between January 1, 2010, and March 31, 2018. Specifically, we researched federal and state bills (which are proposed laws) and laws (which are enacted), and federal, state, local, and NGO programs, using the UConn Rudd Center Legislation Database,[23] the CDC Chronic Disease State Policy Tracking System,[24] the US Department of Agriculture's (USDA) website,[25] Congress.gov, LexisNexis, and Internet searches. (See the Appendix for search terms and preexisting categories designated on the websites that matched our research question.) Data extracted included program name; government entity or organization that implemented the program, proposed the bill, or enacted the law; year program implementation began, bill was proposed, or law enacted; target population of the bill, law, or program; subsidy transfer mechanism; location of subsidy redemption if applicable; and definition of eligible F&Vs.

Congress's Powers to Effectuate a National Retail-Based F&V Subsidy Program

To provide a general overview of congressional powers that may relate to a national retail-based F&V subsidy program, we assessed Congress's power to require or incentivize activity, or disincentivize inactivity, by state or local governments, NGOs, or retailers. Using LexisNexis, we researched US Supreme Court decisions, because these are binding on all courts and jurisdictions, and federal statutes and regulations relating to existing federal programs. This research was supplemented with Internet searches for governmental and gray literature reports on federal laws and programs aimed at incentivizing or disincentivizing any type of activity. We identified and evaluated Congress's authorities to effectuate a national retail-based F&V subsidy program.

Definitions of regulatory mechanisms include direct regulation (the imposition of rules to modify behavior), licensing (granting legal permission or conferring a right for an activity; can require payment and/or come with restrictions or requirements), taxation (compulsory payments to government),[26] tax incentives (reducing tax liability by engaging in a certain activity[27]), and conditional funding (government funding conditioned on the recipient engaging in certain activity[28]).

Results

Policies and Programs That Subsidize F&Vs

This research identified multiple examples of how federal, state, and local governments and NGOs have provided reduced-cost F&Vs to consumers; these findings are summarized in Table 1. Five federal programs were identified (Appendix Table 1). Three of these provided no-cost (free) F&Vs to certain groups, including a farmers' market program utilizing paper vouchers and accomplished through a grant to state agencies that agree to pay a percentage of the administrative cost of the program for participants in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC);[29] an F&V Cash-Value Voucher program that is funded through a congressionally mandated set-aside in the WIC appropriation for the program itself;[30,31] and a program in which the federal government awards grants to states, territories, and tribal governments (which may operate locally through NGOs or local governments) to provide low-income seniors with coupons for F&Vs.[32] The fourth and fifth federal programs were for SNAP beneficiaries: The Healthy Incentives Pilot is funded through a project grant and provides a rebate on SNAP recipients' electronic benefit transfer (EBT) cards for a prior qualifying purchase of F&Vs,[33] and the FINI Program (now GusNIP), allows participants to earn incentives redeemable for F&Vs.[17] We additionally identified 3 federal bills that aimed to provide ongoing subsidized F&Vs to SNAP recipients.

At the state level (including the District of Columbia [DC]), we identified four state laws and 17 bills to provide subsidized F&Vs to participants in various federal programs (Appendix Table 2). In addition, we found 74 programs (six multistate, 22 state [including DC], 46 local), funded by the federal government (often through FINI grants) or NGOs and administered by state and local governments and NGOs, to

Table 1. Summary of Identified Federal, State, Local, and Nongovernmental Organization (NGO) Examples of Fruit and Vegetable Subsidy Policies and Programs

Program/Policy	Target Populations	Transfer Mechanisms*	Locations for Redemption	Examples (Types of F&V Subsidized)
Federal fruit and vegetable subsidy programs	-WIC participants -Low-income seniors -SNAP participants	-Paper voucher/coupon -Rebate on EBT card	-Farmers' markets -Farmers -Roadside stands -WIC-eligible retailers -Community-supported agricultural programs -SNAP-eligible retailers	USDA FMNP (fresh fruits, vegetables, and herbs; may be required to be locally grown in some states)
Federal and state (including DC) bills and laws provide funding to supplement federal food assistance programs	SNAP, WIC, FMNP, SFMNP, Medicaid, TANF, and SSI participants	Generally, appropriations bills; transfer mechanisms not specified	-Farmers -Farmers' markets -Roadside stands -Community-supported agriculture programs -SNAP retailers	Maryland AGRICULTURE Code Ann. § 10-2001-10-2005 (2017) (matches fresh fruit and vegetable purchases made with FMNP, SNAP, and WIC benefits at participating farmers' markets throughout the state)

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Table 1. *Continued*

Program/Policy	Target Populations	Transfer Mechanisms*	Locations for Redemption	Examples (Types of F&V Subsidized)
Multistate, state, local, and NGO fruit and vegetable subsidy programs	-SNAP participants -WIC Participants -SFMNP participants -Participants receiving federal benefits (SNAP, WIC, TANF, SSI Disability, Medicaid, Medicare, Senior Grocery Plus [commodity supplemental food program]) -Patients at certain health care locations -Patients diagnosed or at risk for a diet-related chronic disease -Seniors -Low-income persons, especially: • formerly incarcerated • diagnosed or at risk for a diet-related chronic disease -SNAP participants, especially: • pregnant and postpartum women • those who receive less than $200 a month • children -Whole population (focus on low-income communities)	-Paper coupon/voucher -Electronic voucher/ gift card -Electronic discount -Token/wooden coins -Store loyalty card -Voucher check -EBT card rebate -EBT card discount -Cash-register-generated coupons -Reduced-price produce box -In-kind produce -Electronic wallet	-Farmers' markets/stands -Retail store • Grocery • corner store • specific chain -Mobile vendors/markets -Cooperative -Community supported agricultural locations -Food hub -Food pantry	Washington, DC's Produce Plus is available to participants in federal food programs, whereby eligible DC residents receive voucher checks (with no prior qualifying purchase) to be redeemed at farmers' markets for fresh, locally grown fruits, vegetables, or cut herbs

Continued

Table 1. *Continued*

Program/Policy	Target Populations	Transfer Mechanisms*	Locations for Redemption	Examples (Types of F&V Subsidized)
State bills and laws that provide a tax exemption for F&Vs	-Consumers -Manufacturers -Wholesalers -Retailers -Vendors -Grower-sellers	Exemption from state taxes otherwise imposed	-Farmers' markets -Retail establishment open markets -Roadside stands -Producer-owned retail food cooperatives	Virginia Code §§58.1-609.2, 3.2-4738 (2011) (sales tax exemption to individual who grows and sells "agricultural produce," which means fruits and vegetables, at local farmers' markets and roadside stands)

Acronyms: DC, District of Columbia; EBT, electronic benefit transfer; FMNP, WIC Farmers' Market Nutrition Program; SFMNP, Senior Farmers' Market Nutrition Program; SNAP, The Supplemental Nutrition Assistance Program; SSI, Social Security income; TANF, Temporary Assistance for Needy Families; USDA, US Department of Agriculture; WIC, The Special Supplemental Nutrition Program for Women, Infants, and Children.

*Sometimes a combination of mechanisms are utilized—for example, exchanging a voucher for a token at a farmers' market or using the EBT card to obtain a voucher.

incentivize the purchase of F&Vs (Appendix Tables 2–4). Although these programs varied in their target populations, the vast majority provided benefits to SNAP participants. The remainder targeted populations in other federal programs such as WIC, seniors, hospital patients, low-income individuals at risk for chronic disease, or people who were formerly incarcerated. One program had no formal eligibility requirements and provided in-kind fresh F&Vs through mobile units serving underserved areas.

These 74 programs employed three main mechanisms to incentivize F&V purchases: reducing prices, matching purchases, and providing rebates. All of these programs were voluntary for vendors. The programs had various administrative mechanisms to transfer reduced-price F&Vs to participants, including (in descending order from most utilized) tokens or wooden coins; paper coupons or vouchers; direct discounts or reduced prices; EBT card rebates or discounts; store loyalty cards; gift and discount cards; cash-register-generated coupons; reduced-price produce boxes; voucher checks; electronic vouchers; "electronic wallets"; and in-kind produce. Certain electronic methods, including EBT cards and cash-register-generated coupons, relied on retailers' existing point-of-sale register systems or retailers' modification of their systems. Some programs simultaneously provided financial incentives to retailers to participate, update point-of-sale systems, or train personnel, or nonfinancial incentives such as positive public relations and government-sponsored advertising (data not shown). Many programs only provided F&Vs upon participants making a qualifying purchase. Definitions of eligible F&Vs varied across programs. Most supported only fresh F&Vs, with some emphasizing locally grown fresh produce; others permitted canned or frozen F&Vs without added sugars, fats, or salt.

In addition to the direct subsidies described earlier, in the minority of states that tax groceries,[34] we identified two state laws and 11 state bills that provide tax exemptions for F&Vs, either directly to consumers or to manufacturers, wholesalers, distributors, retailers, or specific vendors (Appendix Table 5). The other states do not apply a sales tax to the majority of groceries, so they already exclude F&Vs.[34] These findings indicate that states use their tax systems to reduce financial burdens on actors along the supply and demand chain to reduce prices of groceries, and F&Vs in particular.

In summary, except for state F&V tax exemptions, all identified programs and policies relied on voluntary participation by vendors and retailers, most commonly at farmers' markets. Federal programs provided direct subsidies to consumers. When state and local governments were involved, they used their spending powers and power to grant tax exemptions, but none imposed taxes or used licensing. All policies and programs targeted specific populations, particularly lower-income groups. Most programs focused on fresh produce, largely because they were implemented in farmers' markets, but several covered additional F&Vs and operated in broader retail establishments, including grocery stores and supermarkets. Benefits were provided via a wide range of instruments, including electronic systems.

Congress's Powers to Effectuate a National Retail-Based F&V Subsidy Program

The US Constitution sets forth the federal government and each state as separate sovereigns (local governments are a creation of the state). Under this system, Congress cannot require states or localities to act, for example, to carry out a national program.[35] Rather, Congress must use authorities granted to it in the Constitution. This research identified three congressional powers relevant to creating a national retail-based F&V subsidy program: the powers to regulate interstate commerce, to tax, and to spend. These powers, examples of how these powers are used in other policy domains, and their potential to effectuate a national F&V program are described in this section and summarized in Table 2.

Commerce Clause. Congress may regulate interstate commerce pursuant to its power under the Commerce Clause. The term *interstate* encompasses a broad range of seemingly "local" activities that Congress may nonetheless find "substantially affect interstate commerce."[36] For example, the Supreme Court has upheld Congress's use of the Commerce Clause to broadly require a federal minimum wage,[37] to regulate a wheat farmer who grew more wheat than permitted under his quota for personal use,[38] and to apply the Civil Rights Act to restaurants that procure a "substantial portion" of their food through interstate commerce (even if purchased through local suppliers).[36] Based on these cases, it can be expected that the vast majority of food retailers would be subject to Congress's Commerce Clause reach for a national F&V retail subsidy program.

Under the Commerce Clause, Congress has the power to regulate existing interstate commercial activity. For example, in the environmental

Table 2. Federal Powers Under Which Congress Could Create a National Retail-Based Fruit and Vegetable Subsidy Program

Federal Power	Legal Authorities and Constraints	Applicability to National F&V Subsidy	Policy Implications	Additional Considerations for Implementation
Commerce Clause Congress shall have the power "to regulate commerce . . . among the several states, and with the Indian tribes."	The Commerce Clause gives Congress the power to directly regulate existing interstate activity and to license and regulate existing interstate activity. This does not include the power to compel commercial activity. *Interstate* is interpreted broadly to reach local activity that would have a substantial impact on interstate commerce.	Congress can directly regulate or license food retailers, condition the license on compliance with an F&V federal program, and provide states and localities the opportunity to administer or co-regulate retailers directly under the program. Congress cannot compel retailers to sell F&Vs or states, localities, or NGOs to administer a national F&V program.	Using the commerce power is feasible for a mandatory program. A possible policy option would be for Congress to regulate and license interstate food retailers, condition the license on compliance with an F&V federal program, and provide states the opportunity to administer the program.	It would likely be challenging for the federal government to oversee compliance based on the large number of retailers, so Congress would need to create or designate a federal agency to oversee the program and administer it in states that do not administer it themselves.

Continued

Table 2. *Continued*

Federal Power	Legal Authorities and Constraints	Applicability to National F&V Subsidy	Policy Implications	Additional Considerations for Implementation
Power to Tax "Congress shall have Power to lay and collect Taxes, Duties, Imposts and Excises"	Congress can impose taxes to generate revenue and regulate activity and Congress can tax inactivity. Congress can also issue federal licenses, for which the licensee has to pay a fee, as part of its taxing power. Congress can provide tax incentives to encourage behavior.	Congress can tax nonadherence to a national program. Congress can license (for a fee) all retailers and require they abide by program requirements as a condition of the license. Congress can grant tax incentives to retailers to induce participation in a national program (which functions like a spending program).	There are both mandatory and voluntary strategies possible using the taxing authority. Taxing nonadherence with a federal program (mandatory) would be politically unpopular and could hurt certain retailers. Providing tax incentives (voluntary) and licensing retailers through the taxing authority for a fee (mandatory) are both possible strategies.	The tax system does not provide the government proper control over effectuating and evaluating the policy goals of a program. If used, a new taxing bureau or expansion of the Alcohol and Tobacco Tax and Trade Bureau would be recommended to oversee policy objectives.

Continued

Table 2. *Continued*

Federal Power	Legal Authorities and Constraints	Applicability to National F&V Subsidy	Policy Implications	Additional Considerations for Implementation
Power to Spend Congress shall have the power "to pay the Debts and provide for the . . . general Welfare of the United States"	Congress may spend money to further federal objectives. Congress routinely conditions federal funding on an agreement that the recipient use the funds according to federal requirements. There are four such funding mechanisms: project grants, block grants, direct spending programs, and categorical grants. Conditional funding must meet the following requirements to be considered constitutional: (1) the program provides for the general welfare of the United States; (2) Congress sets forth the conditions unambiguously so recipients can exercise their choice knowingly; (3) the conditions are related to a federal interest in national projects or programs; (4) the condition does not violate the Constitution.	Direct spending and categorical formula grants can be used to incentivize compliance with a voluntary national program; block grants offer too little control and project grants are too limited (eg, in time and amount).	A conditional funding strategy is a viable policy option for a voluntary program. The federal government would provide funding to states, local governments, and/or nongovernmental organizations to effectuate and administer the policy.	Using the spending power is the most politically and administratively feasible method to effectuate a national retail F&V subsidy program.

protection context, Congress uses its Commerce Clause authority to require hazardous waste facilities to comply with federal standards for treatment, storage, or disposal.[39] When directly regulating in this manner, Congress may require the regulated entities to obtain permits or licenses to engage in the activity, as it does in the hazardous waste facility example.[40] Congress may also allow for state regulation within federal guidelines. In the case of hazardous waste facilities, the federal government allows states to implement their own program within federal guidelines, and a federal administrative agency (the Environmental Protection Agency) regulates locations where states do not act.[41]

Congress may also prohibit particular activity using the Commerce Clause; for example, it prohibited the manufacture, sale, and transport of intoxicating liquors from 1920 to 1933.[37,42] Congress cannot, however, regulate entities that abstain from commercial activity or require entities to engage in commercial activity under the Commerce Clause.[35] Thus, it could not require food retailers to sell F&Vs under this mechanism.

Although Congress could create a national retail-based F&V subsidy program under the Commerce Clause, it could be challenging for the federal government to oversee retail compliance based on the sheer number and variety of food retailers in the United States. Thus, under this approach, the federal government would likely need to rely on state cooperation either directly or through a licensing mechanism, similar to the hazardous waste facility example. However, unlike in the environmental context, there is no federal agency specifically in charge of food retailers to issue regulations and administer the program in states that do not implement their own programs. In this case, Congress might consider designating an agency, such as the USDA, which administers multiple federal food programs, to oversee such a program. The USDA (or another designated agency) could work with state and local regulators on implementation of such a program.

Taxing Authority. Congress can use its taxing authority to reach private entities (eg, retailers, NGOs) and effectuate national policy. Taxes are revenue producing and, if high enough, can also regulate behavior—for example, by influencing purchasing decisions. In addition, although the federal government cannot use its Commerce Clause power to regulate inactivity, it can tax inactivity.[35]

The taxing authority does not authorize penalties that create an "exceedingly heavy burden" or are punishments for unlawful acts or omissions.[35] Some food retailers operate at a low profit margin (such as discount retailers in low-resource communities), so taxes that result in the closure of food stores could potentially be deemed a penalty because it would be "so punitive" as to potentially "destroy" the taxed entity.[32] If used, such a tax policy would need to account for this unintended consequence. In addition, taxing retailers who do not comply with a national F&V program could be politically unpopular and burden businesses that communities may wish to welcome and retain, likely rendering this avenue less viable than other options.

Using its taxing power, Congress can also issue federal licenses, for which the licensee pays a license fee (which is payment for a service and not a tax). Unlike under the Commerce Clause, this power can reach purely in-state activity.[35] For example, the federal government historically required all liquor retailers to obtain and pay for federal licenses.[43] Congress could ostensibly license F&V retailers through a permit/fee process that would require mandatory retailer compliance in the F&V subsidy program. This method, like licensing under the Commerce Clause, might be administratively burdensome given the diversity and numbers of food retailers nationally and the federal government's lack of a role overseeing complex retail requirements.

In addition to assessing taxes and requiring licenses under the taxing power, Congress can also encourage certain activities by granting tax incentives, including exemptions, which reduce gross income for taxpayers based on their status or circumstance; deductions, which reduce gross income due to expenses taxpayers incur; and credits, which reduce tax liability dollar for dollar. Under the tax code, these are collectively deemed "tax expenditures," which are exceptions to the normal tax structure.[27] For instance, the federal government provides deductions to entities for the charitable donation of "wholesome food"[44] and tax credits to entities that engage in research.[45]

Providing tax incentives to food retailers is a potential method to encourage voluntary compliance with a national F&V subsidy program. However, the Government Accountability Office found that tax expenditures function, and often have similar policy goals, as spending programs, discussed in the next section.[27] A drawback of using the tax system is that it does not enable the same degree of agency discretion or evaluation as if it were administered by an agency dedicated to the policy objective.[27] The vast majority of tax expenditures are administered by the Internal Revenue Service (IRS), an agency that is not responsible for policy objectives and is not equipped to evaluate the efficacy of tax expenditures to meet policy objectives.[27] Alcohol tax regulations are administered by the Alcohol and Tobacco Tax and Trade Bureau (TTB), which engages in substantive regulation in addition to taxation. Nonetheless, federal alcohol regulations do not address specific retail practices, which are regulated by state and local governments. As such, although the taxing agency would oversee the taxation mechanism, it does not have the capacity or expertise to oversee or evaluate successful implementation of the F&V policy objectives. An expansion of TTB or the creation of a new specialized bureau could support a national F&V subsidy program using the tax system and provide more policy oversight than generally available through the IRS. Without this and additional oversight tools, the use of taxing authority would not be as effective as other mechanisms to ensure oversight of policy objectives.

Spending Power. Congress can facilitate federal objectives by using its spending power. It has four primary mechanisms to provide federal money to states, local governments, and private entities to carry out federal policy: project grants, block grants, direct spending programs, and categorical grants. Through these mechanisms, Congress conditions funding on the recipient's engagement in activity that aligns with federal goals.

Project grants are awarded through a competitive process and limited to specific concrete projects; funding is generally small and time limited.[46] For example, the USDA provided project grants through the FINI Grant Program to support projects to increase F&V purchases among SNAP participants.[47] Although directly relevant to a national retail-based F&V subsidy program, the scale and time limitation of this mechanism are not favorable for a sustained national program.

Block grants provide fixed annual appropriations to state governments for broad purposes, with few restrictions or requirements.[48] Block grants generally do not increase in amount to meet increased need, often do not rise with inflation,[49] and may allow states to cut programs and shift the funds to other purposes.[50] These drawbacks reduce efficacy for a national retail-based F&V subsidy program through the block grant mechanism.

Direct spending programs provide money for specific policy goals governed by statutory criteria and are not subject to annual appropriations decisions. Examples include SNAP, Medicare, and farm commodity programs. Through SNAP, for instance, the federal government provides direct funding to food-insecure households to purchase food, and additional separate funding to state agencies to administer the program; the federal and state governments share administrative costs, while states provide money to local agencies for administrative assistance.[48]

Lastly, the federal government can allocate funds through categorical grants, which are restricted to a specific purpose and subject to the annual appropriations process. Such grants include large programs like WIC and Medicaid, for which federal funding is allocated to each state according to a formula set out in the law—called a categorical formula grant—under which each state qualifies for funding according to the formula.[46,51] The WIC farmers' market program identified in the previous section is accomplished through a categorical formula grant to state agencies.[29]

For both direct spending programs and categorical formula grants, Congress establishes parameters of the program and provides states with varying degrees of flexibility within the confines of federal objectives. Programs can be constructed as an entitlement, whereby coverage is guaranteed for each qualifying person without spending limits (eg, SNAP); or discretionary, where funding is limited and can be fully allocated before all qualifying individuals are covered (eg, WIC). Depending on the program, states are either expected (eg, Medicaid, SNAP) or not expected (eg, WIC) to contribute their own funding. For all such programs, states can supplement federal funding but must comply with federal guidelines.[52] The scope, sustainability, and flexibility of direct spending programs and categorical grants makes these attractive options for a national retail-based F&V subsidy.

The Supreme Court has held that such conditional funding arrangements must meet four requirements to be constitutional: (1) they must "provide for the general welfare of the United States" by serving public purposes;[53] (2) the conditions must be set forth unambiguously so recipients can exercise their choice knowingly; (3) the conditions must be related to national projects or programs; and (4) the condition may not violate the Constitution.[28,54] For example, the Court found that the Affordable Care Act's original Medicaid expansion failed the second requirement because it would have required states to extend their Medicaid programs to new recipients, "surprising participating states with postacceptance" conditions they could not have anticipated.[35] This suggests that Congress could not simply expand SNAP to require inclusion of the whole population. However, Congress could create a new funding mechanism that provides funding to states, localities, or NGOs conditioned on the implementation of a retail-based F&V subsidy program. Through this method, Congress can define the outcome while maintaining flexibility for experimentation. Such a conditional funding strategy would be voluntary and is a viable option for a national program.

Considerations for Implementation

Although Congress could ostensibly create a national retail-based F&V subsidy program for retailers using different powers, we identified potential drawbacks to using the commerce and taxing authorities. Nonetheless, if it sought a mandatory program for retailers, Congress could directly license retailers and condition the license on retailer engagement in the F&V subsidy program, using a federal-state cooperative arrangement for state oversight under the Commerce Clause. Alternatively, Congress could provide tax-based licenses to retailers through its taxing authority. In both cases, an expanded role for existing agencies (such as USDA or TTB, respectively) or a new agency would be necessary.

A voluntary program for retailers, which may be more politically and administratively feasible, could be established by Congress through tax incentives or spending through a conditional funding strategy. These mechanisms would each rely on the receiving entity's agreement with the conditions set forth by Congress. Although tax incentives are feasible, they suffer from the same lack of substantive policy oversight to identify whether F&V subsidy goals are met as other taxing strategies. Considering overall elements, the most viable option appears to be for Congress to effectuate an F&V subsidy program using a voluntary conditional funding strategy. A conditional funding strategy could best be accomplished through either a direct spending program or a large categorical grant to state or local governments or NGOs to implement the program.

A national F&V subsidy program that relies on retailers' voluntary participation is also most consistent with existing large federal programs for specific subgroups, such as subsidy programs for F&V purchases in both SNAP and WIC. Similarly, such a retail program could anticipate state or local government implementation like in SNAP and WIC. In these circumstances, states would have several options for implementation, subject to federal requirements, including using their "police power," or the powers to tax or spend. Specifically, states use their police power to address the public's health, safety, and welfare, and states grant this power to their political subdivisions to varying degrees.[55] Through this power, state and local governments have the authority to directly regulate businesses or license businesses and condition the license on compliance with government objectives.[56] Use of these mechanisms would be mandatory for retailers. States, and some local governments, also have the powers to tax, spend, and provide tax incentives, and they could use these powers in a similar manner as described earlier in the context of federal use of these powers.[57] A federal program that provides funding to NGOs for implementation would rely on the NGOs' agreement with the conditions set forth by Congress. Because NGOs do not have the power to require retailer compliance, this would necessarily be a voluntary program for both the NGOs and retailers. The review of F&V subsidy policies and programs in the previous section provided additional insight into how state and local governments and NGOs have implemented similar policies and programs in the past.

Discussion

To our knowledge, this study is the first to investigate legally feasible administrative options for the federal government to create a retail-based F&V subsidy program for the US population nationally. This research identified a diverse array of federal, state, local, and NGO policies and programs that provide insights into implementation of a federal retail-based F&V subsidy. The voluntary nature of retailer participation in the great majority of these programs suggests this is an acceptable model for a national program. The biggest needed advances would be extension of subsidies from targeted subgroups to the broader US population, and implementation across multiple retail settings rather than primarily farmers' markets. Moreover, a national F&V subsidy program operated out of retail establishments would allow for the inclusion of other forms of produce beyond fresh F&Vs, such as frozen F&Vs, which are nutritionally beneficial, can cost less, and lead to far less spoilage and food waste.

Although most existing programs used physical tokens or vouchers, these require production and distribution that would be burdensome on a national scale. An electronic method would be most efficient, especially in traditional retail establishments. Strong precedent exists for this; SNAP is provided only through the EBT system and WIC is moving in this direction.[58] The USDA is considering a one-card system for both SNAP and WIC;[59] development in this area could ostensibly inform administrative options for a national retail-based F&V subsidy strategy. However, because a national subsidy would apply to all shoppers in the retail setting, a system of direct incentive to the retailer may be even more relevant and is worthy of exploration. A system directed at the retailers that creates a default F&V subsidy with reduced need for consumers to act (to obtain and retain a card, for instance) would likely increase participation because it would take little effort on the part of individuals to obtain the benefit.[60] Whichever system was chosen, the government would need to determine the extent it would provide resources to retailers to update their point-of-sale systems to align with the new federal program.

Based on our analysis, the most attractive implementation mechanism for a federal program would be the provision of conditional funding to states, locales, or NGOs to administer the program. Among varied conditional funding mechanisms, we identified direct spending programs and categorical grants as most relevant, which can accomplish national policy objectives while accessing regional knowledge and allowing for state and local experimentation and innovation within the confines of federal goals. Depending on federal guidelines and the resources provided to states and localities for implementation, we found that state and local administration of a federal conditional funding program could rely on voluntary retailer application (like SNAP and WIC) or state-provided tax incentives to retailers to encourage compliance. Alternatively, states and some localities have the legal authority to mandate a retail-based F&V subsidy program in their jurisdictions by licensing retailers and conditioning the license on compliance with the federal program.[56,61]

A national F&V subsidy program could provide benefits more broadly across the country than the multiple programs operating locally and regionally. A federally organized program could also avoid duplication of efforts within the same region, which would increase efficiency and reduce administrative burden. Moreover, the federal government could provide consistent national messaging and promotion for the program. To maximize impact, the federal government should use local and regional implementers in order to leverage their networks and expertise to tailor programs to their communities' needs, while enhancing reach through national coordination. In this way, strategies to engage state and local governments and NGOs would enable the program to incorporate lessons learned from these key stakeholders. In addition to the programs identified in this study, existing relationships include traditional farmer-retailer collaboratives and innovative agricultural hubs through which a group of small farms can work with retailers. The federal government should consider providing resources to state, local, and NGO entities engaged in the national F&V subsidy program, to increase participation and effectiveness.

This current study has potential limitations. Although we attempted to be comprehensive, we might not have captured all relevant bills, laws, or programs. We did not research tribal government policies or private company programs.[62] We did not research evaluations conducted of the programs and policies identified, assess economic feasibility or relative economic benefits of the mechanisms reviewed, nor did we examine retailers' potential needs or burdens such as refrigeration or personnel training. We did not evaluate political feasibility; however, the legal feasibility and pathways identified in the present investigation support the need for future research on political calculus for a national F&V subsidy program. For example, with the federal government spending $160 billion annually on direct health care expenditures for type 2 diabetes alone,[63] demonstrating health care cost savings from such a program would likely be relevant to increase political feasibility. We did not evaluate other upstream mechanisms, such as providing subsidies to farmers, because of uncertainties in how such programs translate into retail availability and consumer prices; moreover, F&Vs are not a farm category but rather each fruit and vegetable type is denominated in its own way (eg, by unit or weight), increasing complexity of such a mechanism. Each of the aforementioned areas are ripe for future research.

Conclusion

A national program to subsidize F&V purchases at the retail level has the potential to significantly reduce diet-related disease and economic burdens across the country. Congress possesses several powers that would allow it to create a national retail-based F&V subsidy program. Overall considerations support a voluntary conditional funding program, or if a mandatory program was desired, a federal-state cooperative program combining regulation and licensing, each with state or local involvement for flexible implementation strategies. Multiple existing programs that generally target population subgroups provide an important foundation to inform potential implementation mechanisms.

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Supplementary Material

Additional supporting information may be found in the online version of this article at http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0009:

Appendix Table 1. Federal programs to subsidize F&Vs
Appendix Table 2. Federal and State (including DC) bills and laws to supplement federal food assistance programs (Laws are in bold).
Appendix Table 3. Multi-state programs that subsidize F&Vs for various sub-populations
Appendix Table 4. State, local, and NGO programs that subsidize F&Vs for various sub-populations (sorted by starting year, then state first, local after)
Appendix Table 5. State bills and laws to provide tax exemptions for fruit and vegetables (Laws are in bold).