Rural-urban linkages in the food system: Challenges and cross-cutting solutions

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The food system challenge: produce more with less

- FAO estimates that a 50% increase in food production is needed by 2050
- Growth of agricultural and crop land is limited
- Soil degradation is common
- Water availability is volatile

Source: Author’s elaboration on data from FAOSTAT.
Factor growth varies by region...

... but significant changes are needed globally.

Source: Author’s elaboration on data from USDA.
The urban-rural gap exacerbates many elements of the food system challenge...center-periphery models and gaps emerge

- Rural areas: food production, otherwise low value added.
- Urban areas: food consumption, high value added, high transport costs.
- Agriculture remains the predominant means of living in rural areas.

Rural-urban job distribution, by sector (2019)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Rural</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>79.9%</td>
<td></td>
<td>29.6%</td>
</tr>
<tr>
<td>Industry</td>
<td>29.3%</td>
<td></td>
<td>29.3%</td>
</tr>
<tr>
<td>Services</td>
<td>19.8%</td>
<td></td>
<td>19.8%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>29.6%</td>
</tr>
</tbody>
</table>

Agriculture jobs (as a percentage of rural)

Source: Author’s elaboration on data from ILOSTAT.
The urban-rural gap exacerbates many elements of the food system challenge...tastes are dynamic and turning resource-heavy

Consumption trends for key agricultural products and projections
(kg/capita)

Source: OECD-FAO Agricultural Outlook 2019-2028
The FS does not utilize the spectrum of biological resources…

Agricultural cropland and crop diversity, by region (1961-2017)

75% of food comes from 12 plant and 5 animal species

Source: Author’s elaboration on data from FAOSTAT.
Solving the food system conundrum requires a systemic approach

<table>
<thead>
<tr>
<th>Producers</th>
<th>Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Incentives</td>
<td>- Information</td>
</tr>
<tr>
<td>- Technology</td>
<td>- Technology</td>
</tr>
<tr>
<td>- Investment</td>
<td>- Investment</td>
</tr>
<tr>
<td>- Cost structures that reflect externalities</td>
<td>- Cost structures that reflect externalities</td>
</tr>
<tr>
<td></td>
<td>- Information</td>
</tr>
</tbody>
</table>
Consumer information requires creative solutions...

Menu labeling can have an impact on consumer choices...

...analysis requires a behavioral approach.