


# Capital Contributions to Food Security

Subjects: Economics

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## Definition

Social capital creates a synergy that benefits all members of a community. This review examines how social capital contributes to the food security of communities. A systematic literature review, based on Prisma, is designed to provide a state of the art review on capacity social capital in this realm. The output of this method led to finding 39 related articles. Studying these articles illustrates that social capital improves food security through two mechanisms of knowledge sharing and product sharing (i.e., sharing food products). It reveals that social capital through improving the food security pillars (i.e., food availability, food accessibility, food utilization, and food system stability) affects food security. In other words, the interaction among the community members results in sharing food products and information among community members, which facilitates food availability and access to food. There are many shreds of evidence in the literature that sharing food and food products among the community member decreases household food security and provides healthy nutrition to vulnerable families, and improves the food utilization pillar of food security. It is also disclosed that belonging to the social networks increases the community members' resilience and decreases the community's vulnerability that subsequently strengthens the stability of a food system.

## 1. Introduction

Food security can be realized by accessing a balanced diet and essential nutrition for a healthy life <sup>[1]</sup>. Achieving food security has become one of the most important goals of governments and international organizations. The number of people exposed to food insecurity is on the rise at a fast-paced. Vulnerability to food security has significantly risen from 1693.3 million, in 2014, to 2013.8 million in 2018 <sup>[2]</sup>. It is estimated that around 704.3 million people had faced severe food insecurity in 2018 <sup>[2]</sup>. Rapid population growth, changing lifestyles, and international institutions' efforts to alleviate poverty are factors that have fueled the growing demand for food. It is estimated that the world's population will exceed 10 billion by 2050 <sup>[3]</sup>, while the number of undernourished people has been increasing since 2015 <sup>[2]</sup> as it has reached 815 million in 2018 <sup>[4]</sup>.

According to Schmidhuber and Tubiello <sup>[1]</sup>, there is food security when all human beings have access to the nutrition and food preferences needed for a healthy life. To measure food security, Ruane and Sonnino <sup>[5]</sup> consider four criteria: Food availability, food accessibility, food utilization, and food system stability. As food availability indicates that high quality and nutritious food should be available in a region, regardless of whether it is produced or processed locally or internationally. Food access means that people need to be able to access food both physically and economically. Food utilization refers to the fact that all age groups should have access to healthy food that includes proper nutrition to live a healthy life. Ultimately, food system stability explains a system that provides enough food to the community and is also resilient to economic and climate shocks.

On the other hand, there is ample evidence that climate change has had a negative impact on crops and food productions. Climate change has led to droughts that have dramatically diminished agricultural yields as temperatures rise and changes in precipitation regimes, and it is expected that the impacts will be even exacerbated by 2050 <sup>[6]</sup>. Several solutions and factors had been recently proposed to address food security. For instance, land management <sup>[7]</sup>, advanced biotechnologies <sup>[8]</sup>, and water management <sup>[9]</sup> were used to improve agricultural efficiency. Increasing the financial statement of households (e.g., Reference

[10]) through new policies to raise the level of education [11] has also shown promising results.

Interdisciplinary research has provided valuable findings in the fight against food insecurity, one of which is social capital [12][13].

## 2. Social capital contribution

Social capital can contribute to food security through the synergy that is created from the interrelationship among community members at every stage of the food supply chain from production to consumption. In fact, social capital is the benefits that society derives from the interaction between different networks and groups [14]. Interpersonal relationships within social networks provide benefits to individuals through trust and social support (i.e., bonding capital). On the other hand, the interrelationship between these social networks will bring benefits to each of these networks by exchanging information, resources, and support (i.e., bridging capital) [15]. In the literature, the total benefits that individuals receive from membership in social groups and the benefits that society and each of these groups get from interacting with one other are called social capital [15]. Social capital, the synergy resulting from members of a community's interactions, brings benefits to community members and is a tool that members of a community can use as a solution to problems, such as food security. Kansanga et al. [14] believe that social capital is the resources that are created in human networks with common norms that facilitate social transactions and facilitate achieving the common goals of society for members. Social capital is identified through social organization characteristics, such as trust, norms, and networks. Social capital has a multidimensional character. According to one of the most comprehensive empirical study of the World Bank, it is composed of the following six dimensions [16]: 1) groups and networks, 2) trust and solidarity, 3) collective actions and cooperation, 4) information and communication, 5) social cohesion and inclusion, and 6) empowerment and political action. Due to its multi-dimensional character "as a topic, then, social capital tends lends itself to a mixed-methods research approach. Employing both qualitative and quantitative methods allows researchers to uncover the links between different dimensions of social capital construct a more comprehensive picture off the structure and perceptions of social capital" [16]. Trust is one of the most important dimensions of the social capital, to illustrate its core "social cement" function in the society and institutions, it is worth to quote the founder of the well-known Chinese global high-tech firm: " As Jack Ma, founder of Alibaba, famously said, "when you trust, everything is simple. If you don't trust, things get complicated" [17]. Social capital combines beliefs, rules of behavior, and interpersonal links, without giving reasons why such a comprehensive definition is useful to our understanding of the social world. Several authors have defined social capital in an even more inclusive way, where even attitudes towards others, for example, appear: Social capital outlines trust, concern for others, desire to live according to the norms of one's society and to punish those who oppose it [18]. The literature proves that social capital and the synergy resulted from interactions among community members improve food security status, both directly and indirectly. For example, Martin et al. [12] Show that social capital reduces hunger, and in another study, Sseguya [19] shows that social capital has improved food security in southern Uganda. However, these studies are fragmental. Therefore, the present study aimed to provide a platform in which the results of as much as possible studies are collected. It is tried to present a comprehensive and integrated picture of how social capital affects food security. In other words, this study's main contribution is to show how social capital can improve food security.

There are many studies that have used the benefits of social capital to achieve the goals of food security. However, these studies are fragmental, and there is no complete picture of how social capital can contribute to food security in the literature. Some studies have also used social capital to address food security, but have not directly referred to it as a solution to social capital for food supply. To provide a clear understanding of the solutions that the research of social capital has so far provided for food security, the present study intends to bridge this gap in the literature by systematically reviewing the literature. Therefore, the main research question that the present study is addressing is how does social capital improves food security? In other words, by answering this question, this study tends to provide a theoretical framework illustrating how social capital contributes to the improvement of food security in different stages of the food supply chain. To this end, this study first identifies and reviews the published

documents in these two areas (i.e., food security and social capital), and accordingly, corresponding hypotheses are presented for designing the theoretical framework. A food supply chain (FSC) is a network of actors who deliver food from farms to final consumers in stages. The actors of the FSC are farmers, processors, distributors, retailers, and consumers (e.g., References [20][21]). Where farmers harvest the primary crop, processors, and pack the final products, distributors deliver the final products to retailers, and retailers are the final destination where the final products are delivered to consumers [22]. The present study uses a similar approach to analyze the role of social capital in each of the food supply chain stages, which means that this study considers farmers, food processors, distributors, retailers, and consumers handling as the food supply chain stages. Classifying articles based on FSC steps first shows which stages of the supply chain the research has mostly focused on, and second, it shows what solutions are provided to improve food security at each stage of the FSC.

## References

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1. Schmidhuber, J.; Tubiello, F.N. Global food security under climate change. *Proc. Natl. Acad. Sci. USA* 2007, 104, 19703–19708.
2. FAO, UNICEF, WFP, WHO. *The State of Food Security and Nutrition in the World 2019: Safeguarding against Economic Slowdowns and Downturns*; FAO: Rome, Italy, 2019.
3. Wunderlich, S.M.; Martinez, N.M. Conserving natural resources through food loss reduction: Production and consumption stages of the food supply chain. *Int. Soil Water Conserv. Res.* 2018, 6, 331–339.
4. Rickards, L.; Shortis, E. *SDG 2: End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture*; RMIT University: Melbourne, Australia, 2019.
5. Ruane, J.; Sonnino, A. Agricultural biotechnologies in developing countries and their possible contribution to food security. *J. Biotechnol.* 2011, 156, 356–363.
6. Parry, M.L.; Rosenzweig, C.; Iglesias, A.; Livermore, M.; Fischer, G. Effects of climate change on global food production under SRES emissions and socio-economic scenarios. *Glob. Environ. Chang.* 2004, 14, 53–67.
7. Verburg, P.H.; Mertz, O.; Erb, K.H.; Haberl, H.; Wu, W. Land system change and food security: Towards multi-scale land system solutions. *Curr. Opin. Environ. Sustain.* 2013, 5, 494–502.
8. Gressel, J.; Hanafi, A.; Head, G.; Marasas, W.; Obilana, A.B.; Ochanda, J.; Souissi, T.; Tzotzos, G. Major heretofore intractable biotic constraints to African food security that may be amenable to novel biotechnological solutions. *Crop Prot.* 2004, 23, 661–689.
9. Gulati, M.; Jacobs, I.; Jooste, A.; Naidoo, D.; Fakir, S. The water–energy–food security nexus: Challenges and opportunities for food security in South Africa. *Aquat. Procedia* 2013, 1, 150–164.
10. Korir, L.; Rizov, M.; Ruto, E. Food security in Kenya: Insights from a household food demand model. *Econ. Model.* 2020, 92, 99–108.
11. Ekhlaspour, P.; Foroumandi, E.; Ebrahimi-Mameghani, M.; Jafari-Koshki, T.; Arefhosseini, S.R. Household food security status and its associated factors in Baft-Kerman, IRAN: A cross-sectional study. *Ecol. Food Nutr.* 2019, 58, 608–619.
12. Martin, K.S.; Rogers, B.L.; Cook, J.T.; Joseph, H.M. Social capital is associated with decreased risk of hunger. *Soc. Sci. Med.* 2004, 58, 2645–2654.
13. Gallaher, C.M.; Kerr, J.M.; Njenga, M.; Karanja, N.K.; WinklerPrins, A.M. Urban agriculture, social capital, and food security in the Kibera slums of Nairobi, Kenya. *Agric. Hum. Values* 2013, 30, 389–404.
14. Kansanga, M.; Luginaah, I.; Bezner Kerr, R.; Lupafya, E.; Dakishoni, L. Beyond ecological synergies: Examining the impact of participatory agroecology on social capital in smallholder farming communities. *Int. J. Sustain. Dev. World Ecol.* 2020, 27, 1–14.
15. Xu, S.; Barbieri, C.; Seekamp, E. Social Capital along Wine Trails: Spilling the Wine to Residents? *Sustainability* 2020, 12, 1592.
16. Dudwick, N., Kuehnast, K., Nyhan Jones, V., & Woolcock, M. *Analyzing social capital in context: a guide to using qualitative methods and data*; World Bank Institute: Washington, DC, United States, 2006; 46.
17. Malouin, M. *The Importance of learning in the age of Artificial Intelligence: The Evolution of the Role of Auditor*. PhD Dissertation, Szent István University, Doctoral School of Management and Business Administration, Gödöllő, 2020, 23.
18. Bowles, S.; Gintis, H. Social capital and community governance. *Econ. J.* 2002, 112, F419–F436.
19. Sseguya, H. *Impact of Social Capital on Food Security in Southeast Uganda*. PhD Dissertation, Iowa State University, Ames, United States, 2009.
20. Higgins, A.; Miller, C.; Archer, A.; Ton, T.; Fletcher, C.; McAllister, R. Challenges of operations research practice in agricultural value chains. *J. Oper. Res. Soc.* 2010, 61, 964–973.
21. Plà, L.M.; Sandars, D.L.; Higgins, A.J. A perspective on operational research prospects for agriculture. *J. Oper. Res. Soc.* 2014, 65, 1078–1089.
22. Nosratabadi, S.; Mosavi, A.; Lakner, Z. Food Supply Chain and Business Model Innovation. *Foods* 2020, 9, 132.

## **Keywords**

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social capital;food security;hunger;knowledge sharing;social network;sustainable development

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