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Mapping Antecedents and Outcomes of Marginality and Social Exclusion among Small Landholders: A Systematic Review

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Abstract. This study aims to review determinants of the social exclusion (SE) of small farmers in the agriculture sector, which is one of the key approaches to creating sustainable rural development and an integral part of the country's economic development. The selected group's social and economic underpinnings play a vital role in their productive decision-making regarding rural development. As per the literature review, databases of peer-reviewed scientific publications, and official publications of the relevant fields from 2005 to 2020, it has been deduced that the literature lacks elucidated support on the small landholder (SLH) in defining their marginality and social exclusion. This study particularly attempts to fill this gap by reviewing the comprehensive research of said domains. A precise and effective list of main players in this field to the smallholders throughout the developing and developed countries has been produced. Findings indicate that government interventions in terms of the welfare system, credit facilities, agriculture resources, access to the market, and migration of farmers significantly influence decreasing social exclusion, food security, and attainment of the SDGs. Moreover, educational systems through farmer social networks, farmer-based organizations, and farmer field schools help adapt to climate change and the latest agricultural technologies, increase livelihood choices, reduce poverty and inequalities, empower women, and improve the social status of farmers. This is ultimately and positively associated with the social inclusion of small farmers and sustainable economic development.

Keywords: agriculture; climate change; land; social exclusion (SE); social inclusion; sustainable development.

1. Introduction

Any country's agriculture sector is operated in conditions that are far from market competition, whether other markets are operated through demand and supply and commonly less affected by government interventions (Sykuta, 2012). In developing countries, the agriculture sector is considered as the backbone of the economy but is more vulnerable to external shocks such as government interventions, climate change, floods, etc. (Poczta-Wajda, 2015). Such shocks affect agricultural productivity and small landholder' in all aspects. Literature gives due importance to the deprivation of farmers in different elements, anciently small farmers' poverty status was

viewed as lack of income and expenditure, which has gone through different phases and was treated as a multidimensional phenomenon. This deprivation constitutes a lack of specific essential needs, such as decent housing, nutrition, mobility, or services. The debate started by focusing on the process that causes deprivations and is treated as "exclusion" in recent literature. Social exclusion is considered as a dynamic process that refers to the malfunctioning of the main structure in any society that is mainly linked to the social integration of any individual or household (Berghman, 1995). This debate on social exclusion has started in the 90s but was initially taken as a significant phenomenon in developed countries. In developing countries, it is still not getting much consideration, especially in the agricultural sector.

The notion of social exclusion is originated in the 70's in a different form (Atkinson, 2000) and later this phenomenon get more importance in developed countries. The exclusion was taken and evaluated in social, economic, political and cultural perspectives in which people are deprived or inactive in terms of participation (Haveman et al., 1997). Sen (2000) defines this exclusion in active and passive forms and relates the situation when social processes cause deprivation and marginality with passive form of exclusion. In an active form, a status of community i.e. refugee, minority or immigrant cause exclusion and deprivations. The economic deprivations cause exclusion in economic term which leads towards social exclusion for the targeted communities. The treatment of social exclusion is ambiguous in literature, at one end it is considered as an outcomes of socio-economic processes and on the other end it is taken as an outcome of marginality (Zahra & Zafar, 2015; Zahra et al., 2018).

There is no specific definition of social exclusion and inclusion for small farmers in the literature. The existing literature explains social exclusion as non-existent or limited access to social mobility, social capital, networks, and technology (Shortall, 2008). This social exclusion is an outcome of inadequate government interventions and accessibility to the basic infrastructure of better living. When it deals with the exclusion of small land holders, again literature take this phenomenon into different ways. Some explains this in the context of deprivation of rural communities while some take this in the context of farmer's poverty (Bertolini et al., 2008; Hanisch, 2016; Pandey, 2018; Tian et al., 2019). Few studies give relative importance to the processes of exclusion caused by flaws in agriculture business and related externalities such as technology, market access, institutional reforms, digital economy etc. (Commins, 1993; Behrman

et al., 2003; Buvinic, 2004; Ersado, 2006; Bogdanov & Cvejic, 2011; Afshar Ali et al., 2020; Marshall et al., 2020).

In contrast, educated farmers receive more privilege within their societies through more access to economic resources (Pilgeram, 2011; Zhang et al., 2013; Muange et al., 2014; Sheikhi & Maghsoudi, 2014; Paramitha et al., 2018). Some studies highlighted that climate change is the main factor of the social exclusion of small farmers as they are facing various social and economic issues in the adaptation process (Leichenko & Silva, 2014; Cohn et al., 2017; Fandika et al., 2019). Social exclusion also occurs due to rural-urban migration of small farmers, where most of them were not able to find relevant occupations in urban areas due to the lack of skills, so they were forced to work on low wages (Rye & Andrzejewska, 2010; Han et al., 2011). Farm field schools (FFSs) is the main factor identified by various researchers for the inclusion and development of small farmers in rural areas. Through FFSs, small farmers can develop their knowledge and skills and reduce their poverty level (Mancini et al., 2008; Phillips et al., 2014; Charatsari et al., 2016).

Thus, this paper aims to review existing literature to outline the significant challenges of marginality and social exclusion of small landholder in any country, especially developing countries. To enhance the support of the relevant country, leadership is needed to establish a better policy-making for sustainable economic development. The next section of the paper reviews the essential domains highlighted in the previous studies responsible for social exclusion of smallholders and identified major areas to help small farmers' social inclusions within the societies. The third section defines a methodology to conduct this study. Later, the last section draws conclusions and limitations based on the central debates.

2. Materials and Methods

The primary aim of this study is to map approaches and development in the mapping of social exclusion among small landholder. For this purpose, the study mainly targets Wiley Online Library, ProQuest, Science Direct, Web of Science SSRN, AgEcon, Emerald Insight and, the Taylor Francisco databases for reviewing academic publications from 2005 to 2020. These databases contains peer-reviewed journals in the discipline of agriculture. The search only considered English language peer-reviewed research articles, review articles, working papers, conference papers, case studies, case reports, books, press coverage, but commentaries and

interviews were excluded. The searching started using the following general search terms or keywords: “social exclusion” OR “marginalization” AND “small farmers” OR “smallholders” OR “agriculture”, “social inclusion” AND “small farmers” OR “smallholders” OR “agriculture”. Later search was specified through searching “social exclusion” AND “small farmers” OR “smallholder”, “social inclusion” AND “small farmers” OR “smallholder” in the title, abstract and keywords, only scientific publications were included from the following fields: agriculture multidisciplinary, ecology, green sustainable technology, sociology, soil science, agronomy socio-economic. After the scanning of several titles and abstracts, 264 were separated, and 150 papers were studied thoroughly. Through a closer reading of the articles, we determined that 63 of them are eligible, as these papers compare the socio-economic, ecological, agronomic and sustainable development characteristics of small farmers against social exclusion and social inclusion (see the Appendix A for supplementary information about 63 included publications which highlights different areas of exclusion and inclusion). The reason for relying on the word “marginalization” also in our search is linked to the fact that it was interchangeably used for social exclusion. Moreover, the term “small farmers” was also used interchangeably with smallholders in agriculture studies. After the evaluation of 63 studies, we grouped them into 13 areas (Appendix A, Table A1) of small farmers, social exclusion, and inclusion.

3. Approaches for the study of social exclusion/inclusion

3.1. Climate change

In the 21st century, climate variability and change have caused different problems for smallholder farmers, particularly in the developing countries. Many farmers’ livelihoods were severely affected and became marginalized due to the adverse impact of climate change (Dorward, 2009; Gahukar, 2011; Laube et al., 2012; Mercer et al., 2012; Taylor, 2013; Aheeyar et al., 2019).

Taylor (2013) examined climate change, human security and relational vulnerability, and the importance of rethinking sustainable adaptation in the agricultural environment in South India. The study discussed the adaption of climate change to achieve social justice; the human security perspective is useful but doesn’t provide an appropriate systematic method to understand the relationship between inequality, vulnerability, and power. Therefore, political ecology used to address this gap and identify the relational vulnerability; for instance, the means through which socially excluded people are badly merged into social, political, and economic relationships,

making them vulnerable while securing others. Moreover, findings further indicates those vulnerable agrarian households those have less control over water, land, labor, and credit, which is the key to the displacement of insecurity and security. Finally, the study concluded that the transformation of power is essential in situating climate change adaptation, which is more important to explain the issues of equity and human security. Leichenko and Silva (2014) reviewed relationships among vulnerability, poverty, and climate change. Findings reveal that poverty is a multidimensional condition and a dynamic process that is formed through the relationship of the economic, social, political, and environmental process, historical circumstances, individual, and social characteristics. Whereas, climate change has never been considered as the only reason for poverty, results have further highlighted that various direct and indirect channels of climate change and variability might worsen poverty, specifically in developing countries.

Rouf et al. (2015) tested the conditions and issues of peasant's life in Bangladesh by environmental degradation and crop marketing, and they apprehended the consequences and reasons for peasant's poverty. The article used secondary data for analysis purposes, and findings indicated that peasants' traditional culture, social organizations, and cultivation technologies are changing towards mechanized capital agriculture, which leads to injustice and inequality among poor peasants by wealthy peasants. Bijani and Hayati (2015) examine the assessment of farmers' views regarding agrarian water conflict in Doroodzan, Iran. The study used a descriptive correlation technique, and multistage stratified random sampling was applied to gather the data from farmers. The study found that the central water conflict was between the government and farmers. Small farmers are the main losers who are suffering more. Moreover, the leading causes of agriculture water conflict were climate change, drought, water scarcity, and water management. Cohn et al. (2017) argued that the majority of the world's poorest households rely on smallholder farming systems. These smallholders are presently facing climate change issues and societal responses associated with it. The study used mapping and conducted a detailed literature review to compare the household systems and climate fate of different population groups and agriculture systems. Research evidence demonstrated that high smallholder vulnerability typically adapt to stressors and climate shocks. Authors further exposed that when smallholders suffer due to climate changes, production might create various problems including hunger, poverty, migration, civil conflict and a high rate of unemployment. Additionally,

findings highlighted the importance of smallholder farming systems between climate change and sustainable economic development.

Moseley (2016) explored the impact of climate change, political economy, and livelihood dynamics on smallholders' farmers' food security in Botswana. Results found that the marginalization of smallholder farming is more related to the global, regional, and domestic economy because it is linked to climate changes. The study suggests that the government should support smallholders in climate change adaptation through the understanding of ground factors of marginalization and insecurity of food. They should also develop a pro-poor climate adaptation system.

Sattar et al. (2017) studied factors responsible for the vulnerability of smallholder farmers to climate changes in Punjab, Pakistan. The study used three different indices to measure the vulnerability of small farmers to climate change: Livelihood Effect Index, Livelihood Vulnerability Index, and Inter-Governmental Panel Index. Results indicate that education, social networks, and financial capital are the major factors in adopting strategies. Tahiru and Legon (2019) discussed climate change adaptation and its effect on smallholder farmers' livelihoods. The study concludes that government and non-government actors' interventions positively impact the livelihood of smallholder farmers, and neutralized the worsening effect of climate change. The study further suggests that in adaptation processes, to combine traditional and modern practices, they also considered smallholder farmers' socio-demographic characteristics.

3.2. Role of technology in sustainable agriculture and social exclusion

Various studies argued that the adoption of advanced technologies in the agriculture sector could have multiple implications on the economy, society, and environment, both negative and positive, particularly its impact on small farmers in developing countries. The agriculture sector plays a vital social and economic role in developing nations, for employment, domestic consumption, and generation of foreign exchange by agriculture export. Many countries remain uncompetitive in global markets, which fail to adopt advanced technologies. On the other side, ecosystem diversity, local breeding competencies, and farming knowledge might be demolished by external technologies, therefore, increasing the gap between developed and developing countries. These technologies promote capital intensive and large-scale agriculture, providing rare opportunities for illiterate and informally trained farmers. These dynamics might worsen poverty and the process of social exclusion, thus lacking equal access to resources and

opportunities of a specific society or groups (Commins, 1993; Behrman et al., 2003; Buvinic, 2004). Likewise, agricultural industrialization, during the period 1960-1970s of the so-called Green Revolution in Brazil and other regions, significantly increased agricultural exports and output, but these benefits of agricultural outputs were unequally distributed and also didn't fulfilled the specific requirements of local farmers including socio-economic and environmental conditions (Aerni, 2002).

Lee (2005) researched technology adoption, agriculture sustainability, related policies, and issues for developing countries. The study found that although industrializing agriculture with the help of advanced technology greatly enhanced agriculture exports and output, the benefits of productions were unequally distributed. Besides, the use of agriculture technology, it didn't fulfilled the specific socioeconomic farmer's conditions and local environmental conditions, which ultimately worsened social exclusion. Hall et al. (2008) investigated the impact of transgenic technology on the subsistence of farmer's social exclusion. The data was collected through interviews from Brazil and supporting data gathered from Europe, China, and North America. The study observed the contrasting effects of foreign transgenic technology. The farmers who adapt products according to their environment and crop system have less impact, but higher negative impact on those subsistence farmers who are formally less educated due to compatibility and complexity. Moreover, transgenic technology introduced by multinational companies without realizing the broader ethical and social implications leads to social exclusion and inequality for small farmers.

Pircher et al. (2013) explored the causes for less adoption of legume technologies by farmers to improve the fertility of the soil from a community of central Malawi who participated in the participatory trials. The article also examines the effect of the role of gender in agriculture, socio-economic and land ownership distinction within the rural community. The paper disclosed that legumes technology adoption is significantly influenced by two key factors: wealth and gender. Most of the women do not have access to land ownership and traditionally considered for legume crops, and have no interest in soil fertility management for maize crops. The male farmers were not willing to use legume technology in maize-cropping. Several farmers are so poor, and they used paid labor for maize production, and some wealthier farmers prefer to use chemical fertilizer for soil fertility. The study concluded that farmer's livelihoods could be improved by providing them with the information on technology, credit schemes, inputs, and

markets. Hayden et al. (2018) studied the importance of communities of practice and social support; farmer views of the opportunities and challenges of integrated crop-livestock systems (ICLS) on farms managed organically in the Northern regions of the USA. Findings suggested that increasing support for ICLS indicates growing communities of practice where information exchange among farmers and support from peers overcome hurdles to achieve better results in these systems. The challenges which were beyond the control of small farmers include regional infrastructure, insurance & financing and longtime prospect for returns. These unmitigated three challenges required policy support, social infrastructure, and economic incentives to successfully enable farm changes to ICLS in this province.

Emerton and Snyder (2018) examined factors that influence farmers' decision-making about practices of sustainable land management (SLM) and the role of economic and social drivers in Malawi and Tanzania. Results underline the need to understand the importance of SLM interventions instead of simply benefits/cost-based measures. Moreover, farmers' aspirations, needs, and preferences extended beyond aim to enhance short-term production and income or to reduce cash expenditures. Authors also reveal that apparent gaps exist between the sustainable land management decisions farmers' preferences to make and those which farmers are capable of undertaking, given their available resources and economic circumstances. Fandika et al. (2019) examined the benefits of social learning for smallholder farmers in soil water management with the help of user-friendly technology in Malawi. A monitoring tool (chameleon) was created for smallholder farmer's mental fitness for soil water management. The article used 198 farmers from nine irrigation schemes. Chameleon presents information about soil moisture conditions through different colors such as red, green and blue representing dry soil, moderate and adequate moisture status, respectively. The author's intention for using colors instead of numbers was to include all farmers like illiterate and all categories of gender. During the study, farmers practically participated in the installation of sensors, data visualization, soil moisture measurement, and learning by doing. The findings illustrated that the tool benefited the farmers through saving time, labor, water, and helped them to change their conventional irrigation systems. Another benefit of sensor technology was, it reduced the water conflict among different farmers and increased their flexibility towards climate change. Molina-Maturano et al. (2019) have reviewed the constraint-based innovation (CBI) theory in agriculture and sustainable development (SD). CBI helps in achieving the Bottom of the Pyramid needs of smallholder. In

this study, the authors reviewed literature from 2007 to 2019, and 30 cases were selected and classified into agriculture machinery, substitute farming systems, mobile phone applications, water for irrigation equipment, and biomass systems. Findings depict that 'smallholder' and 'inclusive' innovation ideas were used in agriculture context and direction of innovation, innovation networks, and scale were the key features. Besides, results also concluded that further studies on the integration of frameworks, for instance, the Sustainable Rural Livelihoods and Technology Adoption Model, to connect CBI with SD.

3.3. Rural development and social exclusion

The debate on rural development was formerly started in developed countries where most of the rural smallholders and people were first time facing massive poverty and social exclusion. In November 1996, the EU council Ministers passed Cork Declaration to reform rural and agricultural policies. The core objective of the Cork Declaration was to combat rural poverty and improve the well-being of rural people (Shucksmith & Chapman, 1998). The method of rural development all over the EU is reflected in both EU policy and international trends. Considering the global level, development philosophy is prevailing from 'decentralization fever', the belief where participation and decentralization bring government spatially near to societies and allow higher 'social inclusion' and engagement. The process increases the quality and availability of information from rural set up to government, enabling rural people to be more actively involved in governance structure (Jessop, 1990; Harris & De Renzio, 1997; Tendler, 1997). Many other researchers have also explained the process of social exclusion and rural development. For example, Shortall (2004) argued that in rural development practice, social and civic development is essential and partnership empowering local people by decentralization.

Midgley et al. (2005) have argued that most UN initiatives towards rural development failed because of the lack of appropriate data from rural areas. The article highlighted that from the last couple of decades, the government followed the approach with more emphasis on governance. Therefore, the authors suggest that high-quality information is required for rural development and social inclusion by promoting bottom-up approaches. The study further proposed that, through community participation, the government could access relevant information about rural societies and incorporate them into development policies and projects. Shortall (2008) examined the EU rural development programs and discussed the inclusion/exclusion criteria in Northern Ireland. The study found that people who did not participate in these programs are considered

‘socially excluded groups’, which is the misinterpretation of social processes. Moreover, the article argued that this misinterpretation occurs due to the use of confused and interchangeable notions of social inclusion, social capital, and civic engagement. Therefore, there is a strong need to carefully analyze what is meant by civic engagement, social inclusion and why participation is assumed to be the standard of different conclusions about who is included and excluded.

Fleming (2009) investigates the creative economy and development projects of rural Chatham County, North Carolina. The study used a qualitative approach, and results found that creative economic rural development projects were more related to economic strategies instead of environment and social justice. The author further argued that in exclusionary processes, class and race is the most important operator in rural redevelopment. Shucksmith (2012) reviewed approaches of social exclusion, poverty, and inequality in rural areas and related these approaches with class analysis, hypermobility, and place. For class analysis, the author undertook the Bourdievian approaches and argued that there is a need to understand not only the mechanism of construction of social position but also the need to realize how these symbolic and discursive formations are conscripted within class construction and dominance. Besides, it is important to realize how inequalities increase in rural areas and are transferred to intergeneration. Bock (2016) studied the impact of social innovation on rural development and its importance for marginalized people. As rural development is a long-standing problem of Europe, and EU policies continuously tried to solve this problem, but still did not succeed, and the issue worsened due to the recent financial crisis. The author argued that social innovation has provided the solution to this problem by counteracting social inequalities and warranting social inclusion. The article explained that social innovation is unique in its dependence on self-organization and self-reliance because of state withdrawal and austerity measures, as well as its translocal collaborations and cross-sectoral. The study concluded that the earlier ideas of (neo) exogenous vs. exogenous should be replaced by the innovative idea of nexogenous with political recoupling for rural development and inclusion process.

Guirado et al. (2017) explored the role of Social Farming (SF) in local rural development and its impact on households who are at the risk of social exclusion in Catalonia. SF support vulnerable household by engaging them in agricultural activities to empower them, giving them job opportunities, and including them within the societies. Authors further indicated that the phenomenon SF is materialized in many forms all over Europe, and is well-known through

various names, such as Farming for Health, ways which join agricultural activities with health and social care (services), Care Farming and Green Care in agriculture. The data was gathered from detailed interviews with entities who manage these projects, and for the analysis, Social Return on Investment (SROI) and Business Model Canvas (BMC) techniques were executed. Results found that SF projects significantly improve the health of agricultural workers and helps in social inclusion and the empowerment of rural marginal people. Tian et al. (2019) investigates elite capture and social exclusion of the most impoverished rural small farmers in anti-poverty programs in China. The study argued that the government aid through this program has not reached to the deserved poorest people and generated the new phenomena of social exclusion. Social exclusion happened due to the bad administration of anti-poverty programs and the saturnine democratic system. The study further found that the latest changes in social culture and economic structure also caused problems for the poorest people who hoped to escape from poverty. Finally, the authors recommended that, concerning social structural changes, marginalized and socially excluded people must be truly considered in policies and rural development programs.

3.4. Rural farmers' migrants with respect to social exclusion

Research on rural migrated farmers' and their working and living conditions in the developed world has a long tradition (Madzudzu, 1995; Missingham et al., 2006; Bertolini et al., 2008; Gidarakou et al., 2011; Minkoff-Zern & Sloat, 2017; Minkoff-Zern et al., 2019). Rye (2006) analyzed rural-to-urban migration and its long-term effects from the perspective of rural migrants in Norway. The author used the data from the National Migration Register and Norwegian censuses, and then the longitudinal method was applied for analysis. The study found that migrants, on average, achieved more cultural capital and economic resources than non-migrants. Rye and Andrzejewska (2010) investigated structural disempowerment of Eastern European migrant farmworkers in Norwegian agriculture. The study argued that farmers of Norwegian agriculture hire Eastern European migrant workers on cheap wages, which creates the problem of "social dumping". Taking into account this problem, Norway's government implemented labor regulations that specify minimum standards for labor working conditions and wage levels. Based on some interviews with farm migrants, the authors found that the marginalized agricultural migrant labor worked in a situation which is far from the Norwegian labor regulation. As these

migrants do not have other options, they were forced by the employer (farmers) to work in adverse conditions and reduced wage rates.

Research on migrated farmers living and working conditions also observed in developing countries (Sindiga, 1984; Jokisch, 2002; Gray, 2009; Lewis, 2009; Codjoe & Bilsborrow, 2012; Bhatta & Aggarwal, 2016; Nyantakyi-Frimpong & Bezner Kerr, 2017; Carte et al., 2019). Han et al. (2011) examined the social and occupational mobility of small farmer migrant workers in four cities of China (Suzhou, Shenzhen, Chengdu, Beijing). The paper deployed a qualitative interview approach with 109 peasant labors who migrated. The study found that the house registration system is the main hurdle for social and occupational mobility of peasant in cities. Findings further underscored that after spending many years working in cities, many rural peasants plan to go back to their rural areas, mainly due to the social exclusion they faced in urban areas. In a recent study, Wang (2017) investigates the issue of rural farmer's migration to urban areas to improve social status in modern China. The proposed China Family Panel Studies dataset from 2010-2012 was adopted, and the anchoring vignette model was applied. Results revealed that although the rural-to-urban migrants gained better social status than those farmers still staying in villages. Their social status remains significantly more miserable than that earned by urban citizens. Some studies considered migration as the livelihood strategy and positively related to social inclusion. For example, Sihaloho et al. (2016) studied international migration, poverty cycle, and livelihood strategy. Authors found that migration was not only dominated by the lower social class of farmer households, but it was also considered by middle and upper social classes as a livelihood strategy.

3.5. Poverty and social exclusion of small farmers

Hazell et al. (2006) studied small farmers' future in developing countries. The majority of the population in developing countries are living in rural areas and engaged in agricultural activities. It is confirmed that agriculture having the central importance of rural poverty alleviation and rural development. The study found that rural areas, with the help of farming, lots of jobs could be created, a comparison of different countries study witnessed that increase agriculture productivity directly linked with poverty alleviation. Moreover, the role of small farmers is more significant than large farmers in poverty reduction. The smallholdings are run by a poor household, which uses more workers, both from their own families and their poor neighbors. Small farmers tend to spend their income on locally-manufactured products and services, thus

motivating the rural non-agriculture economy and produced more jobs. The study further stretched that new technology might severely affect small farmers as they are not educated and technical. The research also highlighted the problem, which is created by Supermarket operators. As Supermarkets are growing in the developing countries and set strict standards and requirements for supply and product quality, it becomes more difficult for an uneducated smallholder to comply with those standards. Most of the small-farmers are marginalized from the supply chain and try to find-out jobs in the non-agriculture sector for survival.

The article recommended a few policies for smallholders based on this study; the government should ensure that the macro-economic sector is stable, rural infrastructure, public goods, health care, rural education, and funds by the state are available. Moreover, the state also ensures that proper implementation of the rule of law in rural areas, helping smallholders for resolving any land dispute and facilitating them with credit markets (Hazell et al., 2006).

Pritchard et al. (2017) evaluate the land-livelihood nexus and its impact on rural households in two villages of north India, and data was collected through interviews. It has claimed that the area of rural global south leaving agriculture as a livelihood choice. Nevertheless, another argument is opposing and still considering that agriculture is the backbone for rural people's livelihood choice, social prestige, economic security, and self-identity. The article responds to these contradictory problems by executing schema of household ‘hanging in, stepping out or stepping up’ of their landed concern developed by Dorward (2009). The study found that although Dorwad’s middle-ground theory is suitable analytically for understanding the complexities of land and livelihood relationships, but fails to encourage rural household decision making regarding the complex decisions about nonfarm and land-based activities. The findings emphasized on rethinking the importance of land for the development of farmers and their livelihood strategies that are the ways by which small farmers’ ‘hang in’, ‘step up’ or ‘out’ or certainly, and perform other activities.

Pandey (2018) observed the relationship between inequality and poverty, and debt-to-assets ratio and poverty. He also investigated the factors that are responsible for rural households’ poverty in Bihar, it is considered as the most backward place of India economically. Primary data were collected on income, consumption, and assets for the agricultural, and the logit model was used for analysis. Results indicate a significant positive relationship between debt-to-assets ratio and poverty. However, no relationship exists between inequality and poverty. Findings

further highlighted some factors of poverty in the state, such as having limited access to land and livestock, low level of education, big family size, and higher dependency ration. Hameed and Qaiser (2019) analyzed social exclusion in rural Pakistan, where majority of the households depend on agricultural or related activities. The research found that 52% of Pakistani rural households are deprived in terms of agriculture resources, education, health, income, wealth, political and social participation and financial hardship. The study further examined that households of rural Sindh province are more deprived than Khyber Pakhtunkhwa and Punjab provinces. Moreover, the ethnic groups, including Balochis, Punjabis, Pakhtuns, Saraikis, and Sindhis, are all marginalized at a specific level in their respective regions. As Pakistan is an agricultural nation and the majority of its rural households are directly related to this sector, the development of rural households is indirectly linked with the development of the economy. Hence, policies should be formulated to improve the income of deprived households at local and regional levels.

3.6. Government intervention and social mobility

Social mobility is seen as an issue of equal opportunities and the creation of fair societies in the literature (Li et al., 2015). It can be treated differently when it is applied to rural areas or the agriculture sector, where social mobility is considered as mobility of households in different social statuses. It can be the mobility into and out of agriculture, mobility into and out of farming, mobility between different social statuses, etc. Government policies are essential to improve the social mobility of farmers. Government policies are vital to improve any sector through structural changes; unfortunately, government interventions are not proved to be fruitful in the case of agricultural sector deprivations, especially in developing countries (Carr, 1982; Greenshields & Bellamy, 1989; Ilbery & Bowler, 1994; Dev & Rao, 2005; Dorward et al., 2005; Breustedt & Glauben, 2007; Stolze & Lampkin, 2009; Bhowmik, 2012; Nehring et al., 2017; Zhang & Wu, 2018; Jellason et al., 2019).

Early literature reported a connection between government interventions in the agriculture sector and its impact on individual decision to stay in or out of agriculture. Government interventions can be seen in the form of price setting, welfare regimes, and land distribution. In the views of Djurfeldt et al. (2008), local policies and industrialization are the key drivers of mobility in the rural places of Tamil Nadu district. Because of policy negligence, youth in the agriculture sector are discouraged from participating in their parental occupation. Dribe and

Svensson (2008) discussed agricultural policies consideration for the policymakers and youth of Malawi. Due to weak interventions in the agriculture sector, the youth did not take agriculture as a primary source of development. They find several gaps in planning and implementation of agriculture policy, such as limited access to farmland, innovations, and initiatives, and access to market and extension services. Later Huq (2009) highlighted the mechanism of intergenerational distribution of land ownership and patched this with the issues of social mobility and inequality. He employed different inequality measures to analyze the phenomenon, such as the Markov chain model and the Gini index to measure inequality in land distribution.

The deprivation of the agriculture sector depends upon government interventions in terms of poor welfare policies, and in developing countries' cases, most appropriate is the absence of welfare regimes. Developed economies have a good structure to support their farmers, whereas developing economies, due to their weak fiscal systems, often tax them. Ngoc Anh et al. (2012) examine the life quality and income of farmers suffering from the issue of social exclusion and high poverty. The study found that 397 out of 725 farmer’s households are socially excluded economically from the rest of society in the Northern area of Vietnam. The income generated through agricultural activities is less than half from those groups making income through non-agriculture activities. Farmers claim that the central and local government policy related to labor market access is not appropriate for them. Black et al. (2019) researched social inequalities and the 2008 economic crises impact and its outcomes on young rural households of northern England. The authors further explore Bourdieu's theory of practice, youth studies, welfare regimes, welfare mix, and examine the effect of government policies and crises on the distribution of societal and social risk. The study found that the challenges before the financial crisis faced by the young rural people of England still exists. As the new policies do not support more to the societies and families, so they can’t provide more help to the dependent young people. Therefore, because of changes in the welfare system, no secure employment and loss of services worsen the shift of social risk and mounting poverty rate for marginalized people. The moral imperatives responsible for the worse conditions of rural areas stigmatize access to charitable and state help. Hence, local habitus and moral capital intersect with cultural, economic, and social wealth in shape inequalities.

3.7. Socioeconomic status and social capital

The social status could be the degree of prestige, honor, and power linked to the position of an individual in society (Smith, 1937; Davis & Moore, 1945; Yovits et al., 1962; Weber, 1978; Brown et al., 2007). Lundh and Olsson (2011) argued that, in agricultural communities, social status was not only linked with wealth but also determined by land tenure and lineage. Social status generally refers to social stratification in vertical order (Maiese, 2004).

Most of the households who are directly involved in the agriculture sector are facing the problem of social and economic status within the societies. Pilgeram (2011) analyzed how labor practices and class privileges are essential for sustainable agriculture and social sustainability by using the qualitative ethnographic method. They found that the farmers were highly aware of the importance of political class in sustainable agriculture and participate in these systems of class for sustainable farming. Moreover, educated farmers received more privilege and opportunity of off-farm income, also able to get more access to the market by providing foods to upper-middle-class consumers. Later the findings of Ryanne Pilgeram were supported by Zhang et al. (2013) analyzed the impact of the family's human capital on social mobility in the rural community of China. The research was conducted based on the survey data from the last 20 years in the rural community of China. Empirical findings advocate that social mobility in rural areas are strongly related to multi-level education (training and vocational education). Moreover, Paramitha et al. (2018) examined the role of education for rural farmers' upward social mobility in Wringinpitu village, Indonesia. The study claimed that there are other factors for the upward social mobility of farmers except for education levels, like family background, opportunities, and social capital. Authors further claim that the scholarly farmers enjoy the highest social status, whereas junior high school education level farmers only have the lowest social position. Furthermore, low education level farmers are not able to absorb innovative information and remain low in social status and highly educated farmers become role models for other small farmers.

The literature painted many reasons for small farmers' marginalization within the society, and one of them is the income gap. This vast difference leads them to poverty because it reduces the farmer's ability to grow and immobility of consumer markets in the rural areas. Recent studies have started to focus more on the role of social capital in reducing the income gap of farmers. For example, Wang and Lu (2016) examined the impact of social capital on the farmers' income gap through the shapely value theory of social structure and the total amount of social capital in Shaanxi Province, China. The findings reveal that social capital could inflate small

farmers' income gap, and the dimension of social capital can also increase farmers' income gap and structural impact of farmer's income gap on social participation, social trust, and social networks. Rasmussen et al. (2017) studied the importance of leadership skills and social capital for farmers association in Morocco. As the government of Morocco realized the importance of the agriculture sector in economic development, special attention was paid to this sector by different programs for strengthening value-chains for agrarian products and farmers' associations. The study found that small farmers were not enough competent and not having leadership skills to achieve this objective. Thus, Morocco Rural Leadership Program (MRLP) started to connect University staff with faculty staff of the National School of Agriculture (NSA) in Morocco to develop a leadership program for smallholders to construct social capital for sustainable value-chain. Findings indicated that the program not only improves the social capital of small farmers with income but also improved leadership skills and directed to procedural and behavioral change in farmers' associations.

3.8. Women inequality in agriculture

Gender equality is the third Millennium Development goal that is directly linked with social exclusion as either (male/female) are deprived of their rights, hence, excluded. In agriculture, female participation was always invisible because many societies within the Developing World considered males as the key producers (Duvvury, 1989; Canagarajah et al., 2001; Ogunlela & Mukhtar, 2009; Alkire et al., 2013; Villarreal, 2013; Sraboni et al., 2014; Lamontagne-Godwin et al., 2019). The contribution of women in the overall economy, specifically in agriculture, is always higher in Asian and other developing regions of the world. In Nepal, Bhutan, Bangladesh, Cambodia, China, Pakistan, Vietnam, and India, it is estimated that between 60% to 80% of women engaged in agricultural activities (FAO, 2003).

Eneyew and Mengistu (2013) investigate gender inequality and double marginalized livelihoods concept in agricultural pastoral societies. They explain how gender inequality is related to socio-economic factors and other "invisible" forces. Based on qualitative data, results reveal that the women have less control and access than men over land, income, livestock, which are considered as the core factors of a secure sustainable livelihood. Moreover, because of the local customs, violence against women, and a lack of awareness about gender-related government interventions, women faced double marginalization, for being women and for being pastoralists.

Jahan (2018) enquires about the current condition of working women in Khankhanapur, village of Rajbari, Bangladesh. The economy of the country is mainly based on agriculture, and the majority of women are related to agricultural production directly or indirectly. The author argued that Bangladeshis societies followed the patriarchal system where women's work is different from men's and having less appreciation within the communities and family. The study found that although women are playing the most influential role in economic development through their work but due to patriarchal construction, their social status still remains changed, and they have limited access to agricultural resources, land, jewelry, money, etc. The study further proposed that there is a strong need to reconsider the idea of Women in Development (WID) model, that the participation of working women must improve their social status.

3.9. Women empowerment in agriculture

Women in agriculture have always been ahead of men in terms of support, either it's moral or hands-on support in the fields, but it continually has less control over decision-making. Women have always been working in the fields with farmers and have contributed substantially to the total workload for centuries (Pini, 2005; Ogunlela & Mukhtar, 2009; Begum & Yasmeen, 2011; Akter et al., 2017; Jaramillo et al., 2019). A lot of researches has established a strong connection between the involvement of women in the fields with farmers; many researchers have endorsed their contributions through research. Malapit et al. (2015) examined the relationship of women empowerment in agriculture and production diversity on child dietary and maternal diversity by using survey data of households in Nepal. Finding advocates that women empowerment is positively associated with production diversity, maternal nutrition, and children's diets. The study further suggests that female group memberships assist in reducing workload, more control over income, and reduce inequality.

Centrone et al. (2017) examined the gender (in) equality and water indicators mentioned in Sustainable Development Goals (SDGs), five and six, regarding the agriculture sector in Senegal. It is perceived that farmers' organizations are the key stakeholders to successfully attain water management in irrigation programs and agriculture. Nonetheless, there is a common assumption about women's adequate participation in water management could ensure sufficient gender empowerment. However, less attention was paid to the analysis of those who are aggressively participating and benefiting by water development programs. The authors categorized farmers' organizations (FOs) in three types (male, female, & mixed) as a benchmark

to investigate water management and gender. Results disclosed that more similarities exist between female and mixed organizations, whereas significant inequalities between genders are found in economic domains and water techniques. Benson et al. (2017) explored the importance of redefining women's role in agricultural development and also relates this with sustainable development goals (SDGs). The paper thoroughly analyzed the different ways where women in developing countries could perform effectively as global agriculture development agents through their participation in societies, crop & livestock production, contribution to farm operations. Paper further suggested that equal opportunities in terms of assets, land, labor, livestock, extension, and education should be provided to women.

3.10. Treating sustainable development goals through managing marginalized small farmers

Promoting the agriculture sector does not only help the inclusion of small farmers but also who are socially deprived and excluded. It helps to rebuild and achieve sustainable development goals, which are the extension of millennium development goals (Bitzer & Jeroen van Wijk, 2011; Sjauw-Koen-Fa, 2012; Samberg et al., 2016; Florini & Pauli, 2018; Chia et al., 2019; Adegbite & Machethe, 2020). Many researchers highlighted the same notion in their studies from different perspectives.

McMichael and Schneider (2011) studied Millennium Development Goals (MDGs) and food security politics. To achieve the MDGs regarding the eradication of hunger and extreme poverty, small farmers are the principal performers. The study suggests that it is crucial to re-consider small farmers' agro ecological systems regional wise in the International Assessment of Agricultural Knowledge, Science, and Technology for Development (IAASTD) report. The study also concludes that there is a strong need for policies and strategies that stabilize local ecological knowledge and small farming culture for the achievement of MDGs.

Abraham and Pingali (2017) highlighted the smallholder transformation in agriculture to attain sustainable development goals (SDGs). The study reveals that the primary nationwide agriculture production performed by small farmers, approximately two billion poor people across the world, are directly relying on the agriculture sector for the livelihood, wage-earning labor or working as cultivators. The importance of small farm development to attain the SDG is undeniable. Authors argued that nine goals of 17 SDGs related to hunger and nutrition (goals 1 and 3), poverty reduction (goals 1 and 8), social freedom & inequality (goals 5 and 10) and environment (goals 12, 13, and 15) are directly connected with the agriculture sector. The paper

further found that SDGs such as nutrition, poverty, environmental, and social goals could be achieved through commercialized agriculture in the developing countries. The authors proposed few policies to fix transaction costs (e.g., for favoring maize, wheat, and rice), including accessing credit, R&D, quality inputs, and support commercialization, diversification, and intensification. In agriculture policy, there is a strong need for gender-sensitive methodology in developing countries to address social problems faced by women and smallholders in agriculture activities, access to market and technology.

Padda and Hameed (2018) estimated different levels of poverty in rural areas of Pakistan and had linked the studies with SDGs. The study reveals that 44% of households are living at the poor and most mediocre levels, with insufficient sanitation facilities, deficiency of pure drinking water, inappropriate energy sources, adverse housing conditions, and inadequate economic resources. Findings suggested that additional funds from federal and local governments should be provided for education, social welfare, agriculture development, and water supply in rural areas of Pakistan. Vamuloh et al. (2019) systematically reviewed the literature to find out the factors responsible for small farmers' participation in the contract farming program (CFP) and its relation to achieving SDGs. The success of CFP largely depends upon small farmers' participation, which is a prudent issue worldwide. After examining 97 published peer-reviewed articles from 1977 to 2017, the study found that the most influential factors of farmers' participation in CFP are farm structure, farmers' demographic, farmers' attitude, and farmers' characteristics. Authors suggested that there is still a need for detailed methodologies to investigate the small farmers' participation in CFP, and international food organizations must also consider the highlighted factors as they develop policies for successfully attaining SDGs.

3.11. Farmers social networks in sustainable agriculture development

Social network theory (SNT) defines how relationships and information are constructed in the context of dynamic social groups within the communities and essential in determining socio-economic lives of stakeholders of the economy as they are connected to improve their skills, knowledge and define new incentives. As compared to the standard labor market, the role of the network is slightly different as it helps farmers to adopt new technologies, knowledge exchange, meeting with challenges of new hazards, crop market, etc. The strong and weak ties of the farmers helps them to be in or out of exclusion both in a developed and developing country

(Caniëls & Romijn, 2008; Downey, 2010; Oreszczyn et al., 2010; Läpple & Van Rensburg, 2011; Alia et al., 2014; Compagnone & Hellec, 2015; Carlisle, 2016; Beaman et al., 2018).

Recent efforts have explored divergent exclusionary mechanisms that hinder smallholders from escaping more extensive poverty. The role of social networks of farmers found significant improvement in production, consumption, farmers learning, sharing knowledge, exchange behavior, and sustainable agriculture development. In the last decade, Liverpool and Winter-Nelson (2010) explored the importance of social networks in the adoption process of new technology in rural Ethiopia. Although in recent years, many countries of the world significantly grew economically, whereas Ethiopia remains the poorest state in the world. More than 80% population of the country is directly engaged in agriculture. Due to low productivity and climate vulnerability, farmers remain deprived. The smallholders who adopted modern technology can get rid of the poverty, but the adoption rate remains low. Authors found that social networks had significant importance in the learning process of farmers regarding the adoption of new technology. The theory of exclusion considers immigrants as the primary stakeholder.

Hightower et al. (2013) measured the social and economic outcomes through the social capital theory of immigrant farmer programs, as observed by agriculture scholars. Immigrants in the USA from Africa have suffered from underemployment and high poverty. Many of them were turning to farming to maintain their income, food, and health. Results directed that social outcomes have been related to reciprocity and trust, while economic consequences associated with social network growth. Furthermore, the importance of the social network for farmers' exposure concerning crop varieties improvement analyzed by Muange et al. (2014) in Tanzania, Sub-Sahara Africa. Smallholders are relatively not interested in the adoption of improved crop varieties due to a lack of information. Results exhibited that the agriculture information networks mostly used for the exchange of information among those farmers who possess similar wealth and educational levels and play a significant role in sustainable agriculture development.

Cadger et al. (2016) used the social network approach to examine and compare the structure of knowledge networks among farmers' who participated or not in the agriculture development projects in the two areas of Ghana. Findings highlighted the male farmers who were affiliated with the project having big social networks than non-affiliated female farmers. Furthermore, farmers with large networks acts as an advisors within communities, which demonstrate a significant role in making a bridge between external agriculture and the local rural community.

Authors further reveal that the knowledge networks are an important variable regarding crop-specific management practices which engage farmers in more diverse agriculture production. Therefore, farmers' networks were more effective in the sharing of information and help in land management and sustainable agriculture development. Gebrekidan Abbay et al. (2019) scrutinized the relationship among participants in social networks, social status, and sustainable livelihoods of households in rural Ethiopia, where the main source of household income is through agriculture practices. Study results shows that the income of households significantly influenced by their social status, indicating that households with high social status tend to participate in different social networks in order to improve their status in communities.

3.12. Farmer based organization

Recent literature divulges the importance of farmer's based organizations in rural areas development through providing different types of support to smallholders who are deprived and socially excluded (Bebbington, 1991; Wennink et al., 2007; Bachke, 2009; Moustier et al., 2010; Yang & Liu, 2012; Addai & Owusu, 2014; Sokchea & Culas, 2015: Hanisch, 2016; Kolleh, 2016; Guirado et al., 2017). Efendiev and Sorokin (2013) conducted the comparative analysis of rural social organizations (RSO) and its effect on farmers' cooperative development (FCD) in Russia and new emerging economies like Vietnam, India and China and others. FCD's role has been considering vital in the development of the rural economy in underdeveloped countries. The study used a comparative analysis approach in emerging economies in the area of RSO that effects on FCD. Research results suggested that local characteristics of RSO significantly influenced the development of farmers' cooperatives, and traditional features of RSO affect FCD both negatively and positively.

Mohammed et al. (2013) observed the dimensions of farmer-based organizations (FBO) that build farmers' social capital and how farmers access increases to credit facilities. Authors argued that in developing economies, FBO is the key that supports agriculture value chains. Study data were collected from 210 FBO member farmers and non-member farmers in Northern Ghana. PCA and logit models were used for analysis. Findings show that the major dimension of social capital was network connection, homogeneity, collective action, level of trust, and respect of contract having a significant positive relationship with access to credit. Later Sheikhi and Maghsoudi (2014) used different term 'trade systems' for FBO. They studied farmer's attitudes for joining the trading system of agrarian activities and identified the significant factors on it in

Abdanana County, India. The research found positive relationships of attitudes for joining trade systems with social status, farmers' education level, and agriculture experience, arable land for cultivation, community involvement and amount of loan. On the other hand, negative relationship was found with the distance to the town and field components of agrarian land.

3.13. Farmer field schools (FFSs)

Farmer field schools (FFSs) are learning educational courses based on the season-long implementation in the field for small farmers (Kenmore, 1996). FFSs presently used as a means of dealing with worsening poverty of rural areas and sustainable economic development. FFSs were first time executed as a way to assist Indonesian farmers in 1989 to understand the Integrated Pest Management (IPM) (Van de Fliert, 1993). FFSs mainly include groups of farmers who jointly maintain trial plots and learn by doing through observation of the latest agriculture practices. Aiming to develop a farmer’s knowledge and skills in problem-solving by participation, through designed group activities to empower them and also encourage social cohesion by promoting cooperation. Normally, FFSs empower farmers to deal with inequalities through attaining social, economic, and community goals (Yamazaki & Resosudarmo, 2008; Najjar et al., 2013; Kerr et al., 2019). In the recent work, FFSs are the most important means of agricultural extension and education for rural adults. They were adopted by approximately ten to twenty million individuals from 90 nations (Braun & Duveskog, 2011; Waddington et al., 2014). Many international organizations extensively adopted FFSs with the core objective of poverty reduction from the world, such as the Food and Agriculture Organization (FAO) of the UN and International Fund for Agricultural Development (IFAD) (Pontius et al., 2002; Braun & Duveskog, 2011).

Mancini et al. (2008) studied the impact of farmer education on the social and environmental sustainability of cotton farming in Andhra Pradesh, India. The Indian government introduced a new policy called ‘integrated pest management’ (IPM) to minimize the use of highly toxic pesticides that have a bad impact on human health and the environment. However, the policy did not produce sufficient outcomes as decisions need knowledge about ecological and local dynamics. Therefore, FFS was adapted to resolve this problem of ecological knowledge of cotton growers in Andhra Pradesh, India. Results confirmed that the cotton farmers who participated in FFS learning programs quickly gained knowledge about IPM and stopped using highly toxic pesticides, and yield levels remained the same after this reduction.

Phillips et al. (2014) discussed the concept of targeting Farmer Field Schools (FFSs) as a tool for poverty alleviation. FFS provides agricultural education to adult farmers that help them in improving livelihoods and productivity. To explore how FFS impacts farmers' performance, the study adapted meta-analysis and meta-regression analysis. 'Equity' was set as a criteria for some FFS programs and targeted most poor farmers. However, some FFS programs set 'effectiveness' as criteria and targeted farmers with more resources, well-educated and socially strong, aiming to optimize the program's impacts. Findings reveal that the programs, where participants were more educated, might be more effective in increasing yields, adoption of innovative farm practices, and sharing FFS learnings with neighboring farmers within the same community. Findings further suggested that poorer and illiterate farmers will benefit more if they directly participate in FFS programs rather than receiving knowledge indirectly from their neighboring farmers. Charatsari et al. (2016) investigates the relationship of Farm Field Schools (FFS) with social capital and innovative agriculture development. It has been argued that FFS improves farmers' skill, knowledge, and competency and also builds social capital within local communities. The authors in the study analyzed this claim by collecting data from cotton farmers and facilitators who participated in the FFS projects and aimed to develop competencies in three areas: occupational safety, farm management, and integrated crop management. With the help of regression analysis, the study confirmed that the social capital build by farmers' collective innovative production and knowledge they received by participation in FFS.

Charatsari et al. (2018) investigated the impact of FFS on farmers' psychological and social needs in Greece. FFS is a non-formal way of education, which is considered a lifetime learning technique for new skills and competencies. Results indicated that there is a high probability of participating in FFS for those farmers who experienced social exclusion from society. Moreover, the study confirmed that FFS increased acceptability in their communities of those farmers who were socially excluded and marginalized from the community. Karimi and Niknami (2020) analyzed the effects of FFS on the knowledge, economic, production, and social status of greenhouse holders in Tehran Province, Iran. Structural analysis shows that FFS has significant positive impacts on social participation in the economy, knowledge, and production.

4. Discussion and conclusion

This paper attempts to review recent literature on small farmers or smallholders with regard to their social exclusion and inclusion perspectives in rural areas of developed and developing countries in between 2005 to 2020. The major focus of this study was on developing countries as the majority of small farmers are deprived and marginalized in these regions.

In reviewing climate change, the research highlighted the very first important factor responsible for the social exclusion of small farmers, which has been discussed in the recent research. In rural areas, and particularly in developing countries, climate change is also the major cause of small farmers' social exclusion. The smallholders are economically, socially and politically excluded. They are facing issues of injustice, inequality, credit insecurity, water conflict, migration, civil conflict, unemployment, insecurity of food and health, less control over water, land, and labor, within their societies due to climate change (Taylor, 2013; Leichenko & Silva, 2014; Cohn et al., 2017). The education of small farmers is considered to be an important factor in dealing with climate change issues (Sattar, 2017; Tahiru & Legon, 2019). Previous studies confirmed that agriculture technology has a broader range of implications on the environment, society, and the economy, in negative and positive ways affecting small farmers. Although agriculture technology helps to increase output, save time, labor, and water, the benefits are unequally distributed as a majority of small farmers are illiterate and untrained. Therefore, these farmers face miserable poverty and social exclusion (Lee, 2005; Hall et al., 2008). Technical education and learning practices could improve the adaptation process of new technology, and economic benefits could be fairly distributed among small and wealthier farmers (Hayden et al., 2018; Fandika et al., 2019). Lack of rural development is considered as one of the major reasons for the exclusion of small farmers in the literature. Many developing countries do not even have clear policies for the development of rural areas where the smallholders' main source of livelihood is agriculture. Major findings of the previous studies reveal that the lack of rural people participation in development projects, unsecured land tenure, limited basic assets access, inappropriate data, misinterpretation of social exclusion, and bad administration of development projects are the main causes of social exclusion (Midgley et al., 2005; Shortall, 2008; Tian et al., 2019). Social exclusion also occurs due to the migration of small farmers, where most of them were not able to find relevant occupations in urban areas and other parts of the world where they moved due to lack of skills and education. Consequently, they were forced to work on low wages and live in poor conditions (Rye & Andrzejewska, 2010; Wang, 2017).

Studies also explained some factors responsible for the misery and poverty of smallholders, including limited access to land, big family size, higher dependency ratio, lack of agricultural resources, poor health, and less financial support, etc. (Pandey, 2018; Hameed & Qaiser, 2019).

The study finds some interesting factors of social exclusion among small landholder. The government role found to be a crucial factor, directly or indirectly, in all domains which possess exclusion in rural areas. Any government is responsible for local development, innovations and initiatives, access to market, and extension services. In developed countries, the situation is better than in developing countries, where farmers face poor welfare regimes, limited access to market, and pricing strategy. At the same time, labor practices, class privilege, farmers' education, income gap, and leadership skills influence social capital, which eventually has a direct effect on social exclusion (Dribe & Svensson, 2008; Ngoc Anh et al., 2012; Black et al., 2019). Goal 5 in SDGs is gender equality, as women's inequality in agriculture is also the reason for female farmers' social exclusion (Centrone et al., 2017). It was noted from available researches, although women performed key roles in agricultural activities, that due to local societies and customs, they were treated differently as compared to men. Females were facing social exclusion in terms of less control and access over land, income, livestock, local patriarchal system, agricultural resources, land, jewelry, and money (Eneyew & Mengistu, 2013; Jahan, 2018).

Later, our review outlined multiple areas through which the problem of social exclusion could be overcome. For example, female participation and empowerment in agriculture could produce favorable outcomes in terms of production diversity, maternal nutrition, water management, improving children's diets, reducing workload, and more control over income. It also helps to reduce inequality, which ultimately leads to attaining the SDGs and social inclusion (Sraboni et al., 2014; Benson et al., 2017). Studies also pointed out that the SDGs could be achieved successfully through marginalized small farmers' participation. The International Planning Committee for Food Sovereignty explained that small-farmers 'cool the plant and feed the world (McMichael & Schneider 2011). The role of farmers Social Networks is one of the key factors in the inclusionary process of small farmers and sustainable agriculture development, which has been identified in this review. Social network improves smallholders' participation in agriculture business and positively impact on adaptation of new technology, income, food, health, agriculture learning, crop variety, crop-specific management, land management, an

extension of local agriculture and sustainable agriculture development, which ultimately improves the social inclusion process of small farmers (Liverpool & Winter-Nelson, 2010; Gebrekidan Abbay et al., 2019). Similarly, farmer-based organizations (FBO) positively influence the development of farmers' cooperatives and increases credit access. Past researches also highlighted an important factor, including Farm field schools (FFSs), to ensure rural development and poverty eradication through providing knowledge and skills to small farmers and also empowering them by improving their livelihoods and productivity (Mancini et al., 2008; Phillips et al., 2014; Charatsari et al., 2018).

Finally, the study concludes that the government involvement and farmers' education are the most important factors for the success of sustainable economic and rural development, both in developed and developing countries. Government policies can minimize the social exclusion of small farmers through proper welfare systems, credit facilities, availability of agriculture resources, and access to the market. Governments should design policies that discourage small farmer’s migration to urban areas and promote the agriculture sector to ensure food security and the achievement of SDGs. Farmers' education could help farmers in the adaptation of climate change and the latest agriculture technology. With the help of education, farmers can increase livelihood choices and can get rid of miserable poverty. Through education, inequalities could also be eliminated from the societies and achieve women empowerment, which ultimately improves overall productivity. Through education, the social status of farmers also improves within societies through upward mobility. The present review found that Farmers' social networks, farmer-based organizations, and farmer field schools play an important role in farmers' education, which are positively associated with the social inclusion of small farmers. This review also highlighted that the most of research regarding social exclusion of small landholder is done in developed countries, but the problem of social exclusion of small landholder in developing countries is much worse. Therefore, there is a dire need to conduct research on various agriculture areas of developing countries to improve the social status of SLH. There is also a strong need to set appropriate criteria for social exclusion and inclusion with respect to different agriculture areas, thus the right policies could be designed. Literature has also explained that many developing countries have recently started rural development program and these programs has less supported small landholder due to inappropriate information as Tian et al. (2019)

mentioned in their study. Hence, the government should create the right mechanism to collect correct data, therefore, can resolve the problem of social exclusion of small landholder.

5. Limitations and future directions

To the best of the authors' knowledge, this review study is one of the few that particularly evaluates and emerge different perspectives of social exclusion and inclusion in recent studies of small landholder in developed and developing countries. Although this paper tries to review maximum relevant studies on social exclusion and inclusion of small landholder, all papers could not cover in a single paper. As this paper includes both developed and developing countries, if further research specifically on developed or developing countries, then an explicit solution could be generated for a particular region.

Through a qualitative approach, further research required of small landholder' regarding their survival strategies who experience low incomes and social exclusion in developing countries. Moreover, the qualitative approach helps to create a deep understanding of strategies adopted by small farmers in rural areas, and appropriate support programs could be designed by the government. Research on repatriate farmers who socially excluded from the cities and again back to rural areas is also needed. The study needed on farmers' social networks (FSN), and farmer field schools (FFS), and are both approaches improve small farmers' livelihoods and knowledge and helps them in inclusion within the societies of developing countries.

There should be more accountable and transparent studies on how to deal with resistance, inclusion through equality and empowerment, how to build social, socioeconomic status and social capital of deprived small landholder in developing regions, and how new governance policies of rural development could. In recent research, some studies claimed that the main reason for the failure of government welfare schemes for small farmers is because of the inappropriate dataset, thus a study on the validity and reliability of the existing dataset is also demanded.

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