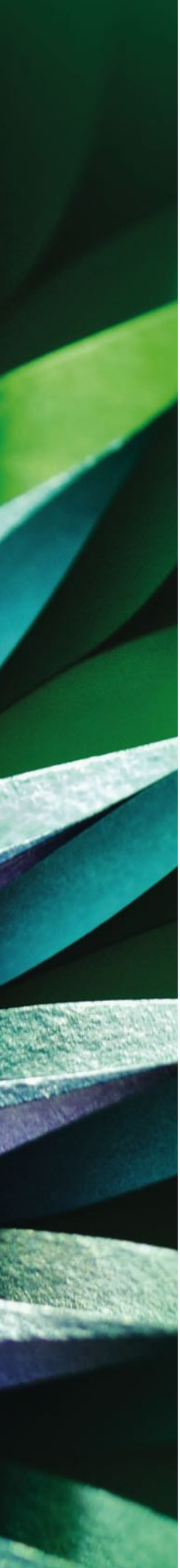

BACKGROUND PAPER

Contract Farming in Asia

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DISCLAIMER

CONTRACT FARMING IN ASIA *

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Abstract

This article reviews the literature on contract farming (also known as grower–processor contracts or outgrower schemes) in Asia on the basis of (i) an EconLit search for all peer-reviewed journal articles containing the terms "contract farming," "grower–processor," or "outgrower scheme*" in their title or abstract; and (ii) further selecting only those articles that focus on contract farming in Asia. This procedure yielded 42 articles that fell in one of a handful of categories and were about a handful of Asian economies. Most (i.e., 28 out of 42) studies were about the impact of contract farming on some outcome of interest—usually a proxy for welfare. Likewise, while some economies are overrepresented in the literature (e.g., India, with 17 of 42 studies) on contract farming, well over three quarters of Asian economies do not figure in this literature at all, pointing to serious shortcomings in terms of external validity. On the internal validity front, only two studies in the literature present credible (i.e., causally identified) estimates.

Keywords

contract farming, grower–processor contracts, outgrower schemes, Asia

JEL Codes

L24, O13, O14, Q12, Q13

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I. INTRODUCTION

The challenge of feeding an expected nine billion people by the year 2050 has led to an increased interest on the part of policy makers in speeding up the development of agricultural value chains, i.e., the series of agreements, contracts, and transactions whereby agricultural commodities go from those who produce them to those who consume them.Within the study of agricultural value chains, much of the attention has been paid to contract farming. At its core, contract farming is a principal–agent relationship wherein an economic agent (i.e., the processor) contracts the production of an agricultural commodity to another (i.e., the grower), and it stands in contrast to spot markets (wherein grower and processor would instead meet in the context of a single exchange transaction) at one end, and to vertical integration (wherein the grower and processor are one and the same) at the other. For the grower, contract farming is a step away from subsistence farming and toward industrial farming. For processors, contract farming can ensure more supply of a given commodity, that is more stable (both in terms of quantity and of quality) than spot-market procurement. For both the grower and the processor, contract farming allows specializing, and thus tapping into the gains from specialization.[1]

Thus, there has been an interest in leveraging contract farming as an instrument of agricultural development policy. Traditional structural transformation narratives posit that, as the agriculture sector modernizes and capital-labor ratios in agriculture increase, the agriculture sector releases workers who can then move to cities to feed a growing manufacturing sector, thereby leading an entire economy on the path toward "modernization," which often means a services sector-heavy economic structure that resembles that of most countries of the Organisation for Economic Co-operation and Development. Thus, development policy makers have looked for ways tofoster the emergence and development of contract farming activities.

Thus, this article reviews the literature on contract farming with a focus on Asia. To do so, it summarizes the articles retained as a result of (i) an EconLit search for all peer-reviewed journal articles containing the terms "contract farming," "grower–processor," or "outgrower scheme*"[2] in their title or abstract; and (ii) further selecting only those articles on Asia. This procedure yielded 42

[1] While processors can certainly contract with a producer organization or cooperative, they usually contract with individual growers. In that sense, the contract farming and producer organization literatures have been distinct.

[2] The asterisk denotes both the singular and plural for "scheme."

articles which are reviewed in this article on the basis of what their main purpose is.[3]

Several articles are now reviewing the literature on contract farming. Three such reviews published in recent years stand out. The first is by Otsuka, Nakano, and Takahashi (2016), who focus on how contract farming can improve production efficiencyand on how it can reduce poverty through policy. The second is by Bellemare and Bloem (2018), who focus instead on what we have learned about the impacts of contract farming on the welfare of those who elect to participate as growers. The third is by Ton et al. (2018), who focus on the quality of the evidence generated in the overall literature on contract farming.

In contrast with the reviews by Otsuka, Nakano, and Takahashi (2016); Bellemare and Bloem (2018); and Ton et al. (2018), this review focuses on Asia, and it breaks down the literature into its constituent themes, which go beyond the mere impact the institution has on the welfare of growers (or on poverty) and beyond its impact on production efficiency. In the spirit of Ton et al. (2018), however, this review does critically assess the quality of the evidence generated so far, and concludes that we do not know much what is credible about contract farming in Asia.

The remainder of this review follows the stages of contract farming in rough chronological order. Section II looks at what we know about the constraints to contract farmingin Asia. In section III, I discuss the literature on grower self-selection into contract farming.Then, because not all contract farming arrangements are created equal, section IV looks at issues of contract design. In section V, I discuss issues of contract enforcement. Section VI discusses the impacts of participating in contract farming on growers; because this is what the bulk of the literature on contract farming has been about, this is the longest section of the paper. In section VII, I briefly present those miscellaneous studies that are of a more descriptive nature. Section VIII discusses the limitations of the literature in terms of internal validity and external validity. I conclude in section IX with directions for future research and implications for policy.

[3] Unfortunately, there are no good data on the extent and prevalence of contract farming in Asia, nor are there any good data on general trends beyond informal reports that contract farming is on the rise because of the modernization of agricultural value chains because of increased incomes. Among other things, supermarket chains tend to rely more on contract farming arrangements than smaller stores (Sutradhar, Nuthalapati, and Bellemare 2019).

II. CONSTRAINTS TO CONTRACT FARMING

The first "stage" of contract farming which this review looks at are the various constraints to the emergence of contract farming. Here, the literature search procedure retained two articles, vis-à-vis Rout et al. (2013) and Sharma (2014).

In Rout et al. (2013), the authors look at farmers' perception of sugarcane contract farming in Odisha, and they list perceived constraints to making contract farming work, both for growers and for processors. Among different benefits from contract farming, growers felt that a lack of capital was a reason to enter contract farming, since processing firms provided inputs such as seeds, fertilizers, and other inputs to the growers *ex ante* of those growers beginning production. The processors simply repaid themselves in sugarcane atharvest. Any sugarcane in excess of the value of those inputs was then purchased from the farmers.

Many contract farming arrangements include a substantial amount of private extension services provided by the processor to the growers (Bellemare 2010). In Sharma (2014), the author looks at contract farming in three districts in Punjab and notes that withdrawal of these extension services by the processor, along with a reneging on prices by the processor, are the major issues afflicting contract farming. Moreover, the lack of adjudication and legal recourse lead to contract farming being exploitative. Sharma (2014) recommends vigilant and strong intervention by the government in order to make contract farming more likely to work.

III. SELECTION INTO CONTRACT FARMING

When the constraints to contract farming are overcome, the question of which growers choose to participate in contract farming arises. Here, studies come into two varieties, vis-à-vis studies focusing solely on selection into participation in contract farming on the onehand, and studies looking at both selection into participation in as well as the impacts of participation in contract farming, on the other hand. We review each type in turn. In almost all cases, "selection into participation" pertains to selection into participation *by growers*. Only a handful of studies look at processing firms.

Guo, Jolly, and Zhu (2007) and Li et al. (2018) both focus on the People's Republic of China (PRC). Guo, Jolly, and Zhu (2007) report that growers identify price stability and access to markets as the reasons why they participate in contract farming. Processors, for their part, report improved product

quality as the primary reason to enter contract farming arrangements with growers. Li et al. (2018), for their part, report that, as production risk increases, farmers increasingly seem to prefer contract farming over spot markets. Both of these findings are unsurprising and consistent with recent findings by Bellemare, Lee, and Novak (2021), who find that participation in contract farming can lead to significant reductions in income variability by insuring growers against price risk (Bellemare, Barrett, and Just, 2013). In the case of Guo, Jolly, and Zhu (2007), price stability is directly tied to income stability. In the case of Li et al. (2018), it makes sense that, as production risk increases, growers would seek out insurance, however partial, against the other form of risk they face, i.e., price risk.

The remainder of the studies looking at selection into participation in contract farming also look at the impacts thereof, and so they will once again be discussed in section VI.

Both Miyata, Minot, and Hu (2009) and Wang et al. (2011) focus on the PRC. In terms of participation, Miyata, Minot, and Hu (2009) find little evidence that processors prefer to work with larger farms. They also find that the household head's education, the proportion of individuals in the household who are elderly, and the distance betweenone's household and the village head's lands are all correlates of participation. Wang et al. (2011) find that whether one is risk-loving or risk-neutral, one's yield, whether one is female, one's area planted under Chinese cabbage, and one's access to household labor are all correlates of participation. All in all, it seems that, in the case of Wang et al. (2011), contract farming tends to favor larger farms. This question of which farms, small or large, tend to participate in contract farming tends to be used as a proxy for whether contract farming is pro-poor, with scale of operation being itself used as a proxy for household assets.

In that spirit, Dhillon, Singh, and Dhillon (2006) look at contract farming in the Pakistani Punjab and find that contract farming is more prevalent among medium-sized farmers. Larger farmers find spot market more attractive than contract farming because of high capacity to undertake risks. They also find that contract farming is more likely to involve more educated farmers.

Mishra et al. (2018c), Sharma (2008), and Singh (2016) also look at who selects into participating in contract farming in India. Mishra et al. (2018*c*) find that the perception of production risk (specifically, weather and pests), irrigation, extension services, and accessto formal credit are the main drivers of participation in contract farming. Sharma (2008) finds participation in contract farming is correlated

with the age and education of the household head, with her farm size and access to formal credit, as well as with whether she is a member of an organization and has a source of off-farm income. Singh (2016) finds that the households that participate in contract farming have larger landholdings.

Moving away from India, the studies by Cahyadi and Waibel (2013) and by Simmons,Winters, and Patrick (2005) both focus on contract farming in Indonesia. In Cahyadi and Waibel (2013), participation in palm oil contract farming is correlated with type of household, the age of the household head, the size of household landholdings that are oil palmplots, and the timing of the establishment of a palm oil plantation. In their case, smaller farmers seem like they are left out of contract farming. In Simmons, Winters, and Patrick(2005), who look at seed corn in East Java, seed rice in Bali, and broilers in Lombok, participation in contracts is correlated with farm size—positively in the case of seed corn and seed rice, but negatively in the case of broilers—as well as the household head's age, education, and participation in farm groups.

Finally, Briones (2015) looks at tobacco contract farming in the Philippines and finds that participation is biased toward households with smaller landholdings. The author concludes that this "support[s] the positive role of contract farming toward inclusive growth in rural areas" in the Philippines.

IV. CONTRACT DESIGN

Only one study in the literature reviewed looks at issues of contract design. Saenger et al.(2013) conduct a lab-in-the-field experiment aimed at evaluating the impact of two incentive instruments—one a price penalty for low quality, and the other a bonus for consistent high quality milk—on grower investment in quality-improving inputs. Their results show that the penalty for low quality causes farmers to use more inputs, which results in better output quality and that, starting from that higher quality, the bonus payment generates higher quality milk still.

V. CONTRACT ENFORCEMENT

A scant few studies on contract farming in Asia look at contract enforcement. Guo and Jolly (2008) look at the relationship between contract type and enforcement in the PRC. Surveying 100 processing firms in Zhejiang province, they find that private contract enforcement mechanisms appear to play an important role in influencing growers' decision to renege on their contracts. This is

important in their context, where public enforcement mechanisms are absent.

Kumar et al. (2013) study the determinants of contract breach in organic basmati paddy farming in India. As with Guo and Jolly (2008), Kumar et al. (2013) also study processing firms, surveying 40 processors in four districts of Haryana in 2011–2012. They find that specific contract features (e.g., fixed prices, performance bonuses, and the building of infrastructure by the processor) are associated with greater rates of contract fulfillment.They conclude that contracts are enforced through "a mix of *quid pro quo*, altruism, and adherence to social norms."

Finally, Saenger, Torero, and Qaim (2014) run a randomized controlled trial with Vietnamese dairy farmers in which the treatment consists in being allowed to getting the quality of one's milk to be assessed by an independent (and thus neutral) third party instead of by the processor. Their results indicate that, when the quality of their milk is assessed by a third party, growers use 12% more inputs, and they increase their output. This suggests that, in contract farming arrangements where quality is an important determinants of grower performance, it may be wise to invest in independent and neutral quality assessment.

VI. IMPACTS OF CONTRACT FARMING

Consistent with the broader literature on contract farming (Bellemare and Bloem 2018), the bulk of studies on contract farming in Asia are concerned with the impacts of participation in contract farming—usually the impacts of participation in contract farming on grower welfare.

This part of the literature begins with a pair of studies by Singh (2002*a*) and Singh (2002*b*). In the former study, the author notes how processors tend to contract with large landowners, how contracts tend to be exploitative and to perpetuate the overuse of chemical inputs, but how contract farming has ultimately led to higher incomes and job creation in the agriculture sector. In the latter study, the author concludes that processors tend to contract with large landowners, that contracts tend to be exploitative, that those contracts perpetuate the overuse of chemical inputs, but how contract farming has ultimately led to higher incomes and job creation in the agriculture sector, especially for women.[4]

[4] If it looks to the reader as though Singh (2002*b*) repeats the findings of Singh (2002*a*), it is because the two studies are almost perfect substitutes for one another.

The aforementioned studies by Simmons, Winters, and Patrick (2005) and by Dhillon, Singh, and Dhillon (2006) look at the impacts of participation in contract farming in addition to selection into contract farming. Simmons, Winters, and Patrick (2005) find that, in Indonesia, contract farming is associated with increased returns to capital for seed corn and broilers, but not for seed rice contract. In all three cases, changes in the type of labor used were associated with participation in contract farming, but in no case was there an association between participation in contract farming and total farm employment. Dhillon, Singh, and Dhillon (2006), for their part, find that participation in contract farming seems to stabilize growers' incomes in the Pakistani Punjab. This is consistent with more recent results by Bellemare, Lee, and Novak (2021), who find that participation in contract farming is associated with reductions in income variability via fixed-price contracts.

Sharma (2008), looking at contract farming in India, finds that contract farming is associated with increases in productivity and in farm income. Likewise, Birthal, Joshi, et al. (2009) (dairy in India); Ramaswami, Birthal, and Joshi (2009) (poultry in India); and Miyata, Minot, and Hu (2009) (apples and green onions in the PRC) find evidence of positive effects of participation in contract farming on welfare. Birthal, Joshi, et al. (2009) find that participating in contract farming is more profitable than producing for the spot market, but they do not find any difference in the prices received by growers who participate in contract farming relative to those growers who produce for the spot market, concluding that processors do not extract monopsony rents in the contract farming arrangements they looked at. Ramaswami, Birthal, and Joshi (2009) estimate the gains from contract farming to both the grower and the processor. Consistent with Coase's theory of the firm (Coase 2012), they find that processors benefit from lower production costs. Growers, for their part, benefit from lower risk even though their margins are not significantly higher than if they produced for the spot market. Miyata, Minot, and Hu (2009) find a positive association between contract farming and income.

Schipmann and Qaim (2010) find that, in Thailand, the farming of sweet peppers under contract is associated with increases in household income. Wang et al. (2011), for their part, find that, in their Chinese data, contract farming does not appear associated with increases in profits. The aforementioned study by Cahyadi and Waibel (2013) shows that participation in contract farming for palm oil in Indonesia is associated with increases in the income of growers, but it also appears to discriminate against smallholders.

Narayanan (2014) is one of the few studies in the contract farming literature to report (some) negative

findings. Looking at four crops in India—papayas, broilers, marigolds, and gherkins—she finds that average treatment effects are not unambiguously positive. While participation in papaya and broiler contract farming is associated with increases in grower welfare, but participation in marigold contract farming is associated with decreases in welfare. For participation in gherkin contract farming, welfare effects seem to be mixed and dependent upon the processor one contracts with. Trifkovic´ (2014) looks at pangasius (i.e., catfish) contract farming in Viet Nam, and she finds that participation in contract farming is associated with welfare increases. Lastly, Briones (2015) finds that participation in tobacco contract farming in Indonesia is associated with increases in profits and that contract farming favors smallholders.

In Cahyadi and Waibel (2016), the authors look once again at palm oil contract farming in Indonesia, but instead of looking at income as in Cahyadi and Waibel (2013), they look at the likelihood of falling into poverty. They find that participation in contract farming reduces the negative impact of price shocks, but not production shocks.

Trifkovic´ (2016) revisits the production of pangasius in Viet Nam to compare production under vertical integration with production for either the spot markets or under contract farming. She finds that vertically integrated farms have higher yields and revenue per hectare than farms that are not vertically integrated (i.e., farms growing for the spot market or under contract farming). She further finds that farms producing for the spot market and farms under contract farming are indistinguishable in terms of farm performance.

Next come a number of studies by Mishra and coauthors on contract farming in Nepal, which are discussed here in rough chronological order. In Mishra et al. (2016), the authors look at paddy seed production and find a positive association between participation contract farming and revenue, profit, and yield, as well as a negative association between participation in contract farming and costs of production. In Mishra et al. (2018*b*), the authors find a negative association between tomato contract farming and employment, butthey find that smallholders seem to benefit from participation in contract farming in terms of yields and profits. In Mishra et al. (2018*d*), the authors once again look at paddy seed contract farming, but also at ginger contract farming, and they find a positive association between participation in contract farming and technical efficiency in both cases. Lastly, in Mishra, Rezitis, and Tsionas (2019), the authors find a negative association between participation in contract farming and both inefficiency and production risk.

Two additional studies by Mishra and co-authors look at contract farming in India. In Mishra et al. (2018a), the authors look at organic basmati rice, finding a negative association between participation in contract farming and yields, but a positive association between participation in contract farming and the prices received by growers, and thus their welfare. Similarly, in Mishra et al. (2018c), the authors find a positive association between participation in onion contract farming and food security.

The most recent studies uncovered by this review all focus on the impacts of contract farming in different economies. Looking at Taipei,China, Wang, Liu, and Chang (2018) find a positive association between contract farming and farm income irrespective of crop in a nationally representative sample. Focusing on the food safety of vegetables in the PRC, Li and Guo (2019) find a positive association between participation in contract farming and whether growers had a certification, but that it had no such association and whether growers paid any attention to toxicity and whether they tested their soils. Khan, Nakano, and Kurosaki (2019) look at the association between participation in contract farming, on the one hand, and income and productivity, on the other hand, for both maize and potatoes in Pakistan. They find that a positive association between participation in contract farming and income in the case of potatoes, but no such association for maize. Finally, Nhan (2019) finds that participation in a contract scheme is associated positively with the prices received by rice farmers in Viet Nam for their output price as well as on their returns.

VII. MISCELLANEOUS DESCRIPTIVE STUDIES

Asokan and Singh (2003) describe the crops and the processing firms—many of them multinational corporations—involved in contract farming in India. Barrett et al. (2012) present an overview of empirical studies on contract farming in five countries across three continents. Their discussion of the results later published (Narayanan 2014) on contract farming in India is of interest for this review. They discuss how geography (i.e., agroecological conditions) matters for where processors choose to locate their contract farming activities. They also explain how fixed-price contracts are used to hedge against price risk, and farmers believe that contract farming raises their net profits. They also report that there are holdup problems for some horticultural products; because local market sales mean selling highly perishable commodities at a much lower prices, some processors exploit their monopsony power. They also report a great deal of movement into and out of participation in contract farming in India.

Next come two critical perspectives on contract farming as a policy instrument, both focusing on India. Ramamurthy (2011) discusses cottonseed contract farming, and notes that "[a]t a time when smallholder contract farming is being suggested as a new development strategy by the World Bank and questioned by its detractors, a vernacular calculusof the economic and affective experiences marked by perplexity may be more widely relevant as generalized characteristics of smallholder capitalism." Sarkar (2014) discusses how the consulting firm McKinsey had suggested that the government should encourage contract farming activities. The McKinsey reports were confidential but were leaked, and the author analyzes them.

The last three studies consulted as part of this review focus also on contract farming asa policy instrument. Swain (2016) discusses the potential advantages and disadvantages of contract farming in India, Dunham (1993) discusses horticultural contract farming in Sri Lanka as a mechanism of change, and Singh (2005) examines the Government of Thailand's potential role in promoting contract farming.

VIII. LIMITATIONS OF THE LITERATURE

Having reviewed the literature on contract farming in Asia, it is now time to critically assess that literature, and take stock of what we have learned in two decades of economic research on the topic. This section looks at the literature first through the lens of internalvalidity, and then through the lens of external validity.

A. Internal Validity

Internal validity relates to whether a parameter estimate is causally identified. In other words, a study's findings are internally valid if, and only if, its relationship of interest (in the case of most studies reviewed for this paper, the relationship of interest is the effect of participating in contract farming on welfare) is causal, and not just a correlation.

Here, the news is not good. Only two of the studies reviewed in this paper present estimates that are causally identified, and are thus internally valid: the experimental studies by Saenger et al. (2013), and by Saenger, Torero, and Qaim (2014). These two studies present causally identified estimates by virtue of being experimental in nature. The remainder of the studies reviewed in this article rely on research designs where the necessary assumptions for causal identification do not

hold. Thus, even in cases whereauthors talk of "impacts" and "effects," one should not be led astray into thinking that the estimates they discuss actually capture causal relationships. That is why this review iscareful throughout to talk of associations and correlations instead of impacts and effects. Even if one were to take the results in this literature at face value and assume they are somehow causally identified, there remains the problem of publication bias. In a landmark article on what we can learn from effectiveness studies on the topic of contract farming, Ton et al. (2018) write:

> Scientific articles are more likely to be written and published when they find a significant effect of the program being evaluated. This publication bias is apparent in the studies that we selected for meta-analysis, as only 3 of the 22 studies report insignificant or negative income effects of contract farming. Notably, two of these three papers evaluated more than one empirical instance of contract farming, and reported a positive effect in at least one other instance. This strongly suggests that the academic literature on contract farming is biased towards studies that find significant effects. The pooled average effect sizes that result from the meta-analysis will inevitably overestimate the "true" effect of contract farming on income because (many) studies with insignificant effects could not be included in the meta-analysis.

Although two of the three studies they mention as reporting insignificant or negative effects of participation in contract farming are those by Narayanan (2014) and Simmons,Winters, and Patrick (2005), note that those negative findings are bundled in with positive findings, and that it is very likely that the literature on contract farming in Asia suffers from publication bias, just like the broader literature on contract farming does.[5]

Ultimately, this literature suffers from too many statistical problems for one to be ableto make a definitive statement about whether participation in contract farming is beneficial to those who participate.

[5] That said, there are no systematic patterns explaining null or negative findings. While "successful" contract farming arrangements (i.e., contract farming arrangements that leave both the grower and the processor better off and wanting to renew the arrangement) share similarities, contract farming arrangements that fail (i.e., those that leave one party no better off, or those in which one party breaches or reneges on thecontract) do so idiosyncratically. In other words, it is as Tolstoy wrote in *Anna Karenina* (1878): "All happy families are alike, but every unhappy family is unhappy in its own way."

B. External Validity

External validity relates to whether findings are generalizable. For instance, with a random sample from a given population, the statistics obtained from that sample (e.g., mean,variance) about specific variables will generalize to the whole population with a reasonable degree of confidence—and one which, according to the statistical Law of Large Numbers, increases as the sample size gets larger.

Here, too, the literature on contract farming in Asia suffers from significant shortcomings. As the table indicates, even accounting for population, some economies are over-represented in the literature (e.g., India and the PRC have comparable populations, but there are 17 studies on India, and 6 on the PRC) whereas others are underrepresented (e.g., there are no studies on the Lao People's Democratic Republic, Myanmar, Malaysia, and a number of other Asian economies, and the likelihood that there is no contract farming in those economies is slim to none). In other words, even if the estimates in this literature were internally valid and credible, it would not be possible to make any statements about contract farming in Asia on the basis of those estimates.

Number of Contract Farming Studies by Country

Country	Studies
People's Republic of China	6
India	17
Indonesia	3
Nepal	5
Pakistan	1
Philippines	1
Sri Lanka	1
Taipei,China	1
Thailand	2
Viet Nam	5

Source: Author's compilation based on review of literature.

Lastly, except for one study—Wang, Liu, and Chang (2018) on contract farming in Taipei,China—none of the studies in this review are nationally representative. That, too, causes a lack of external validity, as is the cross-sectional nature of the data employed in almost all of these studies.

IX. SUMMARY AND CONCLUDING REMARKS

This article has reviewed the literature on contract farming in Asia. On the basis of an EconLit search for the terms "contract farming," "grower-processor," or "outgrower scheme"* in the title or abstract of peer-reviewed journal articles in English, 42 articles were identified. Those articles were then classified according to their main objective, vis-à-vis constraints to contract farming, factors explaining grower selection into participating in contract farming, contract design, contract enforcement, impacts of participation in contract farming, and miscellaneous descriptive studies.

The bulk of the articles surveyed fell into the "impacts" category. Unfortunately, the literature is severely limited in its internal validity and in its external validity. On the former, only two studies relied on an experimental design, and could thus make causal claims beyond any reasonable doubt. On the latter, while some economies (e.g., India) are overrepresented in this literature, entire economies (e.g., Malaysia) are absent from it.

The implication for policy is clear: Given that it is nearly impossible to make any definitive statement about the impacts of participating in contract farming in this contextas well as other aspects of contract farming, it would be a mistake to view increasing the prevalence of contract farming as an objective of economic policy, simply because the quality of the evidence is rather flimsy. To remedy this, more evidence is needed that will yield credible (i.e., internally valid) estimates that have a decent shot at being generalizable (i.e., externally valid) at least in a given country. Thus, even in a literature as sizable as the literature on contract farming in Asia, there is yet work to be done. Here, perhaps the single best policy recommendation is for stakeholders with the capacity to do so to fund a broad research program aimed, first, at documenting trends in contract farming in Asia, and then at generating evidence on contract farming in Asia that is bothinternally and externally valid. Given the promise of contract farming to resolve market failures and foster structural transformation—and thus economic development—this seems like a worthwhile endeavor.[6]

[6] In a prospective piece on contract farming seen through the lens of the New Institutional Economics, Grosh (1994) notes how contract farming can help resolve several market failures. For instance, Grosh notes how contract farming can help growers gain access to agricultural extension services provided by the processor which the growers would not otherwise have access to from public sources.

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